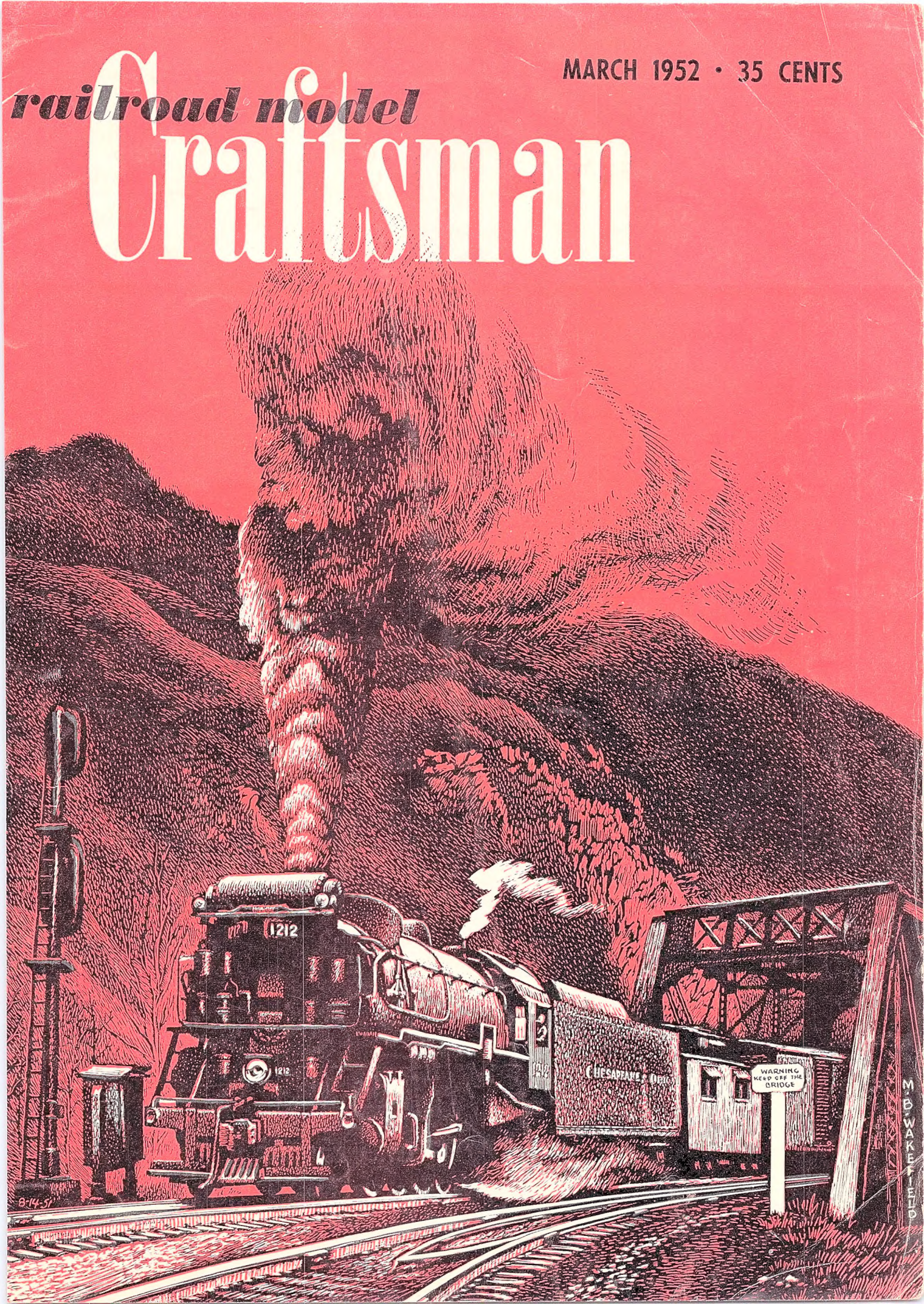
MARCH 1952 • 35 CENTS

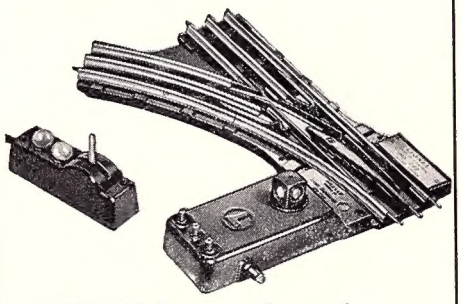
railroad model Craftsman



CHECK YOUR NEEDS from AMERICA'S LARGEST STOCK

5,000 ITEMS! 50,000 PARTS! TRAINS UNLIMITED!

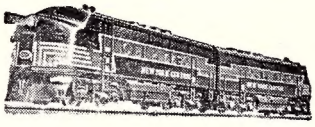
LIONEL



"O" 022 Remote Control Switches, pr. $20.95
R. or L., ea. 12.00

022 Switches, Separate R. or L., ea.	12.00
"O" #042 Hand Switches, pr.	10.95
Peare, R. or L. Switch Kits	4.50
#1121 Switches for 027	12.95
#1024 Hand Switches, pr.	5.75
6019—"027" Uncoupler	3.50
U.C.S. "O" Uncoupler	3.75

LOCOMOTIVES



Santa Fe or N.Y.C. Diesels $47.50

Same—painted and lettered Erie, Nickle Plate, Pennsylvania, or any other road	69.50
#736 LTS Locomotive	46.50
#2035 LTS Locomotive	31.75
#2046 LTS Locomotive	44.50

CARS

#6420 Wrecker Caboose	7.75
#6419 Wrecker Caboose	5.75
#6520 Floodlight Car	7.25
#2460 Crane Car	10.75

STOCK CARS

#6472 Refrigerator Car	4.75
#6454 Assorted Box Cars, ea.	4.75
#3464 Automatic Box	5.95
#3469 Automatic Coal Car	8.50
#3461 Automatic Lumber Car	7.75
#151 Semaphore	4.95
#164 Lumber Loader	22.50
#97 Coal Loader	19.50
#456 Coal Ramp	18.50

SALE ITEMS

Send 10c in Stamps for LIONEL Display Items, Slightly used—**reduced!** List mc 1000

AMERICAN FLYER

CARS

#715 Unloading Car	5.50
#645A Boom Car	4.95
#646 Floodlight Car	6.50
#719 Dump Car	8.75
#636 Flat Car	4.50
#633 Box Car	3.50
#630 Caboose	3.50
#660 Baggage Car	7.50
#661 Coach	7.50
#662 Vistadome Car	8.50
#663 Observation Car	8.50
#771 Stock Yard and Car	14.95

ACCESSORIES

#772 Water Tower	5.50
#577 Whistling Billboard	4.95
#767 Roadside Diner	5.50
#722 Switches	8.95

TRANSFORMERS

#8B	16.95
#12B	32.50

"TT" GAUGE

IT'S THE NEW RAGE

Economical and Realistic—A Whole Railroad on a Card Table

KITS

Complete RR — Loco, three cars track	29.95
0-6-0 Switcher	17.50
2-8-2 Mikado	26.50
4-4-2 Atlantic	
4-6-2 Pacific	24.95
2-8-0 Consolidated	22.00
4-8-4 Northern	38.50
4-6-6-4 Articulated	54.50
Same, Custom Built	79.50
MU Powered Car	10.95
MU Trailer	2.25
Diesel A Powered	23.00
Track, 21 ft., #2052	1.75
Switches, R. or L.	3.00
Freight Cars, Assorted, each	1.50

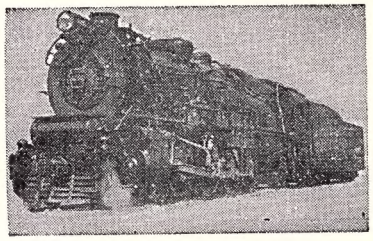
T.T. ASSEMBLED LOCOMOTIVES

C. & O. Articulated	84.50
Northern 4-8-4	47.50
Pacific 4-6-2	42.50
Atlantic 4-4-2	23.75

"O" GAUGE CUSTOM BUILT

2R Unless Otherwise Stated

1	Lionel Superdetail NYC Hudson..	150.00
1	Lobaugh Super Pacific	245.00
1	Each, Icken GN or B&O Mikado..	275.00
1	Lobaugh N.P. Articulated 4-8-8-2 extra detail	450.00
1	Pennsylvania K-4 Pacific	125.00
1	Pennsylvania M-1a	245.00
1	Lobaugh 0-6-0 Switcher	125.00
1	Lionel B-6sb	68.50
1	C&NW Gas Electric, exquisite	90.00
1	Walthers F-3 A&B Lettered New York Central Motors, ball bearings, pr.	175.00
1	B&O Capital limited, 3 tone blue, black and gray, A&B passenger diesel locomotives, 5 streamline custom cars, all super detail	550.00
1	Lionel center 3rd rail twin diesels, painted striped and lettered, either Erie, Nickel Plate, Penna. or a road to your liking	69.50
	Dummy B Units for same	24.75
2	Exquisite Walthers E-7 passenger diesels painted orange, green and gold stripe. Lettered Great Northern, pr.	225.00



"O" Pennsylvania M-1A 4-8-2 ..... $245.00
Chassis, assembled kit 159.50

O GAUGE LOCOMOTIVE KITS

2R or 3R

Hines Northern Kit	87.50
Hines Mikado Kit	69.50
Lobaugh Berkshire	110.00
Lobaugh Pacific	99.50
Thomas Consolidated Kit	48.50
Tin Plate IMP, NYC Hudson	50.00
IMP, Atlantic	35.00
IMP, Pacific	37.50
The IMP Dockside	25.00

"O" SCALE AND TINPLATE MISCELLANEOUS

.172 Brass Rail—99 feet	12.00
Hi Rail—99 ft.	15.00
#6 R. or L., .172 switches	5.00
#8 R. or L., .172 switches	6.50
Gargraves, 2 or 3R, 3 ft.	.95
Hi Rail Switches, R. or L.	4.50
"O" Switch Stands, marker lites	1.75
Electra Switch Machines	1.60
"O" Marker Lights, Pr.	.75
#3 K&D Motors	6.75
#2 K&D Motors	6.45

PITTMAN

Under trolley units— DC 203—3R	14.95
DC 204—2R	14.95

TRUCKS

Athearn Fr. Trucks	1.50
Thomas Fr. Trucks	1.75
Auel Spring Trucks	2.50

TRANSFORMERS

ZW	27.95
KW	22.50
RW	15.50
1033	9.95

PLASTICVILLE BUILDING KITS

Complete House Set with Accessories	2.50
Rural Unit Set	5.00
Shopping Unit Set	5.00
House Unit Set	5.00
3 Boxes, Tree Assortments	3.00

LEONARD M. BLUM'S HOBBY HOUSE INC.

800 HURON RD. CLEVELAND 15, OHIO

Phone: SUperior 1-3210

railroad model Craftsman

including "THE MODELMAKER"—Est. 1924 and MINIATURE RAILROADING Magazines

Vol. 20, No. 10 MARCH, 1952

CHARLES A. PENN, Editor and Publisher

JAMES H. THOMPSON, Managing Editor

MARTIN RIESS, Art Director EDWIN P. ALEXANDER, Research Editor

CLIFFORD B. McPEEK, Staff Photographer

Contents for March 1952

HIGH LEVEL STATION—By Bill Schopp 6
Construction project ideal for a two level pike. Complete building method

PROTOPIX 10
Photographs of interesting prototype installations, adaptable for modeling

EASTBAY ELECTRIC—By Bob Dangel 12
Scenic views of a three by four foot trolley layout

LOCOMOTIVES OF AMERICA—By Edwin P. Alexander 13
Famous locomotive designs. This month, the old ten-wheelers

YOUR NABOR'S PIKE 16
A display of equipment built up by readers of Railroad Model Craftsman

B & A PULPWOOD CARS 18
Prototype plans of car and unloading installation as used on the B & A

THE LAYOUT DOCTOR 21
Three different plans for an HO railroad are shown, based on an Oval Yard Lead

ICING PLATFORM 24
Picture Story of a necessary structure, adapiable to modeling

SMOOTHER, QUIETER OPERATION—By Richard Houghton 26
Proven ideas in layout framework construction

LEAVES FROM A RAILFAN'S DIARY—By L. A. Bartholomew 28
A story of Colorado's famed narrow gauge roads

ACCESSIBILITY 30
Ideas and methods to aid in gaining access to any part of the layout

WHAT'S NEEDED 34

OFF'N THE TABLE TOP 38

SAM, THE TROUBLE MAN 36

THE GALLOPING GOSLING 41

PLANNING A LAYOUT DESIGN 43

NEW PRODUCTS REVIEW 46

THIS MONTH'S COVER, Mikado #1212 approaches JC interlocking on the Chesapeake & Ohio at Clifton Forge, Va. A drawing by M. B. Wakefield.

TURN BACK THE HANDS OF TIME WITH THESE COLLECTOR'S ITEMS!

OLD-TIME AUTOS in MINIATURE!

$1.95 to $3.95

SUCH FUN TO BUILD!

The Wicker Basket was a familiar auto accessory in 1903! This detail and scores of others will be found in our ¾" scale models! So realistic, they're on display in famous museums. Start your collection — enjoy these nostalgic antique autos! They measure 6" to 10½". They come pre-fabricated with all ready-shaped die-cut parts, plastic cast wheels, lamps, radiator, horn, etc. History of each car and step-by-step instructions that a 10-year old can follow, with each kit. At toy, hobby and dept. stores; guaranteed money back if not satisfied. Grand hobby for all from 9 to 90; wonderful for shut-ins and convalescents! Order a complete set! Other models not shown are:

1903 Model "A" Ford—$2.50

1909 Stanley Steamer—$2.95

1904 Olds—$1.95

1911 Maxwell—$2.50

1914 Stutz Bearcat—$3.95

- ☐ 1902 Air-Cooled Franklin ... $2.50
- ☐ 1906 Columbia Electric ... $2.50
- ☐ 1910 International Harvester ... $2.95
- ☐ 1900 Packard ... $2.50
- ☐ 1903 Cadillac ... $2.50
- ☐ 1911 Buick "Bug" ... $2.50
- ☐ 1910 Model "T" Ford ... $2.50
- ☐ 1909 Model "T" Ford ... $2.95
- ☐ 1903 Rambler ... $2.50
- ☐ 1913 Mercer Raceabout ... $3.95
- ☐ 1906 "Old 16" Locomobile ... $3.95

WRITE TO US. ADD 25c FOR POSTAGE AND HANDLING. NO C. O. D.'s. PLEASE.

hudson miniatures OLD TIMERS

"Originators of Antique Autos in Miniature"

SCRANTON HOBBY CENTER, Dept. 32, Scranton 10, Pa.

There IS a Difference

SPORTCO'S FINE MODEL BALLAST

is de-magnitized and free of metal particles that in ordinary ballast would short the per-mag motor of locomotives. All ballast is screened free of powder, true to scale and color.

"HO" BALLAST ..... 35c Pkg.
"O" BALLAST ..... 35c "
CINDER FILL ..... 35c "
SCENIC ROCKS ..... 35c "
BALLAST ADHESIVE . 50c PT.

At your Dealers

SPORTCO PRODUCTS

4817 Frankford Ave., Phila. 24, Pa.

LATEST MODELS

Athearn TANKS

SEND FOR NEW CATALOGUE-35¢

5182 COMMAND CAR 75¢

5180 WALKER BULLDOG $1.75

Precision built, exact in detail. Cast in metal and hand assembled. Also available . . . JET PLANE MODELS!

COMET METAL PRODUCTS CO., INC. 132-07—91st Avenue Richmond Hill 18, N. Y.

DECALS AND HARDWARE FOR YOUR S GAUGE CARS

Champ complete Box and Refr. Decal set, ea. .40
Five for $1.75
(24 different road names)
Set of 4 ladders, brakewheel and housing, air valve, cylinder and reservoir. Complete set, ea. ..... .60
Five sets $2.50
Pressure Cast Box Car Doors, pair ..... .15
5 prs. ..... .60

Free List for stamp

AL'S HOBBY SHOP

836 S. Washington Siloam Spgs., Ark.

Published monthly by Model Craftsman Publishing Corp., Ramsey, N. J. Ed. Adv. and Ex. offices, Ramsey, N. J. Charles A. Penn, President and Treasurer. Helen M. Penn, Secretary. Entered as second-class matter June 7, 1948, at the Post Office at Ramsey, N. J., under the act of March 3, 1879. Additional entry at the Post Office at Kutztown, Pa. Price 35 cents per copy. Subscription $4.00 per year in the United States and Possessions. Canada, Foreign and Pan-American subscriptions $4.50 per year. The contents of this magazine must not be reprinted without permission. Articles, drawings and photos are welcome. When requested, we will endeavor to return all material in good condition if a stamped envelope is enclosed. Unless stated otherwise by contributor, we will assume no remuneration is expected.

Copyright 1952 by Model Craftsman Publishing Corp.

I Have Been Appointed Sole United States Distributor for

MIDLINE RIGHT OF WAY EQUIPMENT

Cork Base HO Trackage

Stocks of this well known line of Right of-Way equipment are limited but still available. Ample stocks of the following items on and NOW. All items are for "HO" gauge.

Plain Cork HO Roadbed, 24 feet for...$4.00
Cork base 24 foot Track Kit 7.95
Turnouts, #4R, 4L, 6R, 6L, or Wye .. 2.75
Turnouts, #8 Right or #8 Left Hand .. 3.00
HO Crossings. The NEW 15° Crossing . 3.00
30° Crossing..$2.50 60° Crossing.. 2.25
45° Crossing.. 2.00 90° Crossing.. 1.75
Bumper Kits, Freight or Passenger, 2 for 1.00
Sample Track Kit, Bumper, Railbender 1.00

Also other HO items. Write for FREE full list.
IMMEDIATE Shipment. Orders $5. or over POSTPAID

HOWELL DAY
P.O. Box 13-C
New Market, New Jersey, U.S.A.
"20 Years Mail Order Model RR Experience"

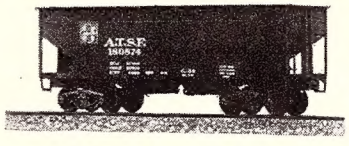
New O Gauge Locomotive Kit

Hines has done it again! Our new modified USRA Heavy Mountain type is available, complete with motor for $78.50 with short tender, or $87.50 with long tender.

This beautiful model is a dual-purpose engine—heavy passenger or freight—and will make an excellent addition to your system.

Also available—our USRA Heavy Pacific at $61.50 and our USRA Heavy Mikado at $62.50 See them at your dealer's or send a long, self-addressed, stamped envelope for our parts catalogue.

HINES LINES, INC.
Newton Illinois



SUPER HOPPER!

Newest thing in HO! Ulrich's offset side hopper has every detail . . . even inside. All-metal construction, one piece underframe, operating hopper doors and sprung trucks are all included For only $2.90. Road names: Santa Fe; B&O; RI; MoPac; NYC; Erie; L&N; SL-SF.

ULRICH Model kits

4233 Babcock North Hollywood, Calif.
Sold only through dealers

See the new

GRAHAM FARISH

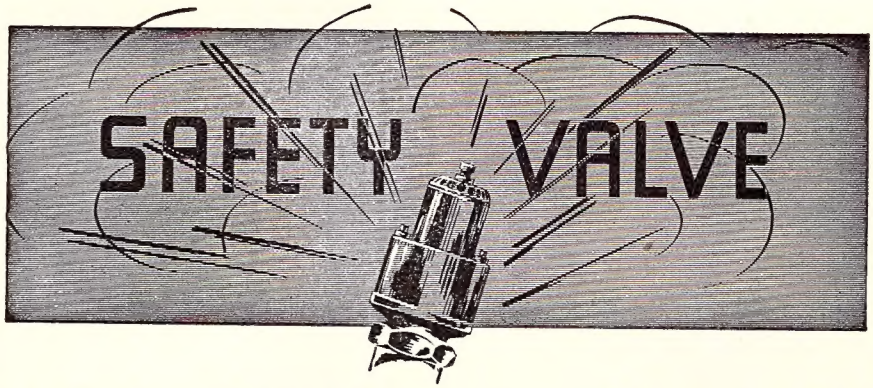
SCALE • HO • MODEL

BRITISH TRAINS

Sold and Serviced by selected Scale model dealers nationally.

Inquiries concerning franchise arrangements are invited from qualified dealers.

U.S. Representatives
E. B. MILLER, ASSOCIATE, INC.
200 5th Ave., New York 10, N. Y.



Flanged Wheel & Steel Rail

The "true railroad fan" (Lou Johnson-January 1952 Safety Valve) rather cramped my style, and therefore I'd like to express my opinion in regards to this particular fact.

Mr. Johnson implies that railroads are not transportation devices. If they are not, pray tell what in heaven's name have our railroads been doing for the past hundred years? You'll have quite a time arguing this point with the A.A.R.

In my opinion, "railroads" are all means of transportation involving the use of a flanged wheel upon a steel rail. Street cars use a flanged wheel upon a steel rail; so do subway systems. Therefore, they too are "railroads". And a model railroader is anyone who seeks pleasure in constructing miniatures of the flanged wheel upon the steel rail. Therefore again, "true railroad fan", trolley enthusiasts are also model railroaders; I can see no distinction.

Have you ever ridden the head car on New York City's BMT, or even the IRT for that matter? Ever notice the intricate track and switch layouts? Ever notice the sharp curves and steep grades? Ever see the Coney Island yards and the "outdoor" trackage that leads to it? If this isn't railroading, and if this doesn't arouse some sort of interest, then man you're just not a "true railroad fan." . . . *A Trackwalker*

Paging Lou Johnson

It is unfortunate that anyone interested in any phase of Model Railroading should be as badly disparaging of another phase as was Lou Johnson in January Safety Valve. I am sure that if he would take the trouble to enlighten himself concerning street railway operation, he would find it as enjoyable as steam.

We are able, on our street railway layouts, to stay much closer to scale than is possible on any but the largest steam pikes. Our turnouts and curves are prototype radii, our cars are prototype length and they do not appear to be other than they are—electric cars run by electricity.

Operation is varied and interesting, particularly if the city is an interurban terminus, for freight and express must be handled and occasionally a maintenance-of-way or line car must be run out without disrupting schedules of streetcars and interurbans.

Frankly, I believe that the added effort required to install overhead wire is more than compensated for when I sit behind my controller (full size from one of Cincinnati's 2400's) for scale speed operation over the lines of the Transit Street Railway . . . *B. A. Ziegler*

They're All Part of our Hobby

If Mr. Lou Johnson (Safety Valve, January, 1952) cannot distinguish between rapid transit and street railways and his so-called "regular railroad equipment," then I suggest he purchase himself a pair of eye glasses and take a closer look. The subway and elevated trains are just as much a part of railroading as is the New York Central's "Twentieth Century Limited" and to my mind far more interesting.

Whether it is a street car rattling through the city streets, a narrow gauge tank engine with a sugar cane consist or an F-7 Diesel with a manifest it's all railroading. If Mr. Johnson does not happen to like street cars that is his business. There are, however, others of us (100% railroad fans) who do! . . . *Robert A. Ramsay*

Real Railroad Practice

I read the article in the December issue, by Ralph Huchison, "For those steep grades," and it gives me a laugh and yet I feel sorry for Ralph.

His first paragraph describes the thrills of watching trains with helper engines battling a grade. He says he never heard of it being done in HO or any other gauge. Here is where I protest. It is being done and regularly on the O gauge South Shasta Lines on both the three rail system and the two rail system. It is done successfully, not just for my own benefit, but before an audience of visitors. I mention the visitors because of the old saying, "It works for you in private but when you show off it doesn't."

Yes, it is a thrill to combine the forces of two or more locomotives; one or two at the point, the other at the rear, and watch them battle a 3% gade on a curve, with tonnage. I find engines don't necessarily have to be exactly geared the same, although it is better if the faster engine is at the point and the slower at the rear. You will find that the slower one will do its work if the grade and load is great enough.

For couplers, I use Monarch automatic and have never had a train uncouple in operation on the two rail system, with or without helpers. On the three rail system, Lionel couplers are used and uncoupling does happen, but seldom . . . *G. A. Humann*

NEW

1952 CATALOG JUST OUT!

CORR'S LATEST CATALOG OF MILITARY MINIATURES

30 EYE FILLING FULLY ILLUSTRATED PAGES OF THE MILITARY MIGHT OF THE WORLD.

Hundreds and Hundreds of minutely detailed miniatures designed, molded and painted in resplendent color by the leading figure artists of the U. S., England, France and the Orient. Complete Armies, Individual Soldiers, Tanks, Historic Personages and Field Units from Ancient times up to the present.

FOR THOSE WHO MAKE THEIR OWN

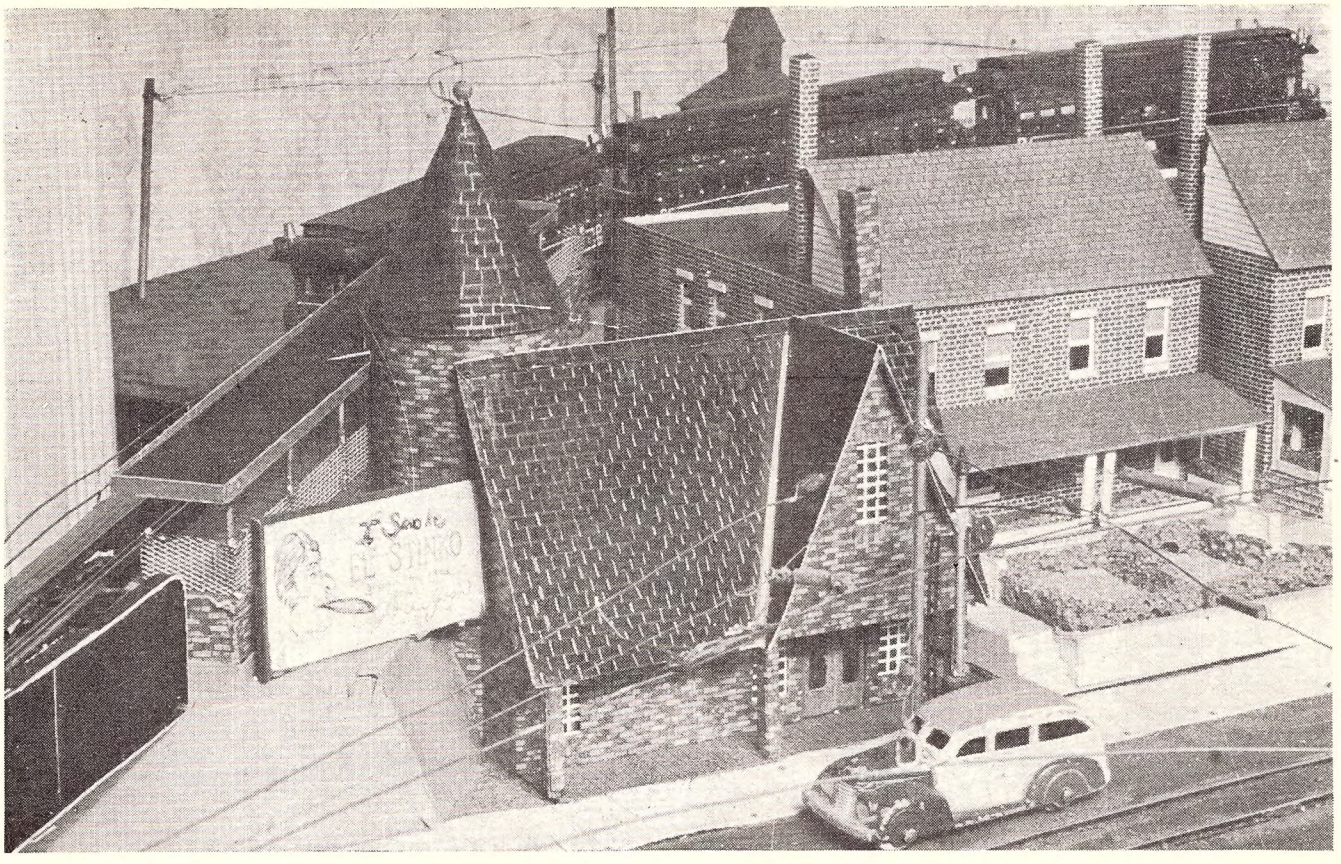
Unpainted castings, molds, brushes, paints and scenic material, also books and postcards showing military figures.

A SPECIAL SECTION IS DEVOTED TO HERALDIC ORNAMENTS AND AUTHENTIC REGIMENTAL BADGES

THIS CATALOG BELONGS IN YOUR LIBRARY
SEND 25c FOR YOUR COPY NOW

CORR'S

812-818 NINTH ST., N.W. **(DEPT. MC)** **WASHINGTON 1, D. C.**



The authors HO gauge model designed to service an elevated line.

...high level station

Here's a cure-all station for trackage located at different levels. This structure can be adapted for most space or gauge requirements

WHERE railroad tracks are at a different level from the street, about the best you can do for a station, using commercially available kits, is to mount one up high with a flight of steps leading down to the sidewalk. This, indeed, is what many real lines do in that situation, but others have the station building at the street level with stairs, esculators, or elevators leading up (or down, as the case may be) to the train platforms. The station described here was built to fit a triangular piece of ground where my third-rail elevated line crossed Main Street while climbing up grade, on the now abandoned Rancocas Valley Interurban system.

It turns out to be an almost cure-all for problems resulting from a station and track located at different levels. All you have to do is put the exit door from the round tower at any required level or angle. This, of course, would in theory require rearranging the stairs inside the station and tower, but the average modeler will not build these anyhow. Fig. 1 shows an installation only slightly different from the original: a passenger subway runs from the station under the tracks to a platform for a second track. Fig. 2 shows tracks lower than street level: of course the tower would then be extended downward to a low platform. Fig. 3 has the track and platform remote from street with a passenger footbridge running from the tower across other tracks or even a road or river to the platform. Fig. 4 shows the station serving two railroads on different levels. Fig. 5 shows one use at a junction.

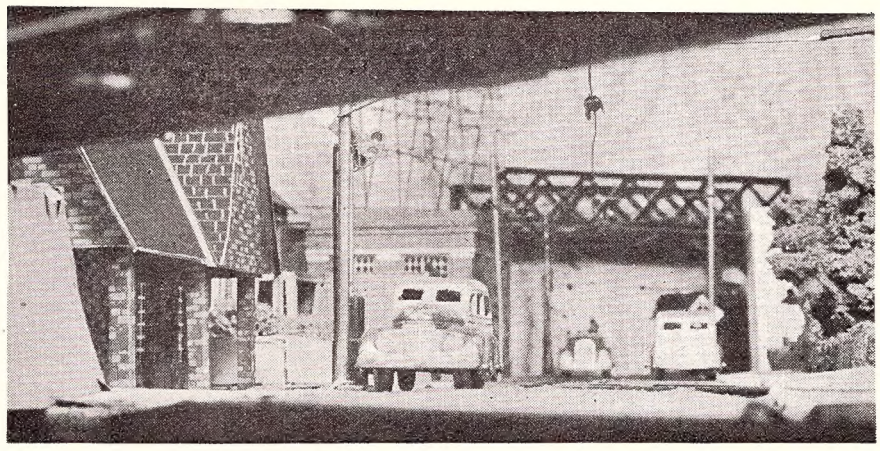
Here are directions for building a similar station which may solve problems on your pike. First get a piece of two inch outside diameter (for HO) mailing tube to use as the tower, cut to what seems a suitable length considering the elevation of your track, and cover with brick paper. No windows or other openings need be cut in this unless you plan on detailing your interior. The inside can scarcely be seen anyway, and the "door", placed at whatever angle you finally decide, is in a little vestibule cemented on at the right place. It is possible to make a suitable tube by cementing filing folder cardboard around balsa discs, but it's easier to use a mailing tube.

On a piece of poster cardboard (15c for a large sheet at any stationery store) on your drawing board lay out the four sides of station in one piece, as in fig. 6. Locate windows, front and rear only, from the plan. Angles for the ends are 60°, but the angles for the front dormer, which you may also lay out at this time from the dimensions given, are NOT 60°, but are determined by the measurements given. If you try to make them 60° you will foul up the whole front of the station. Cut out all window and door openings carefully with a razor blade or hobby knife (sharp, to avoid fuzzy corners). Scribe corners partway thru and bend four walls into a "house".

Cover the outside of the sides with building paper, cutting Xs in the openings and cementing the tabs back through to cover the raw edges. Also cement narrow tabs back over all edges to prevent the paper from peeling off. Use a sheet long enough for all sides, but do only one side at a time, letting the cement set before continuing on around the corner to the next side. This helps avoid tears at the corners. Add lintels and sills to windows and doors, either building paper or plain cardboard. Cut out doors and cement in place. Mark out windows with a ruling pen and white poster paint on heavy transparent plastic. Cut these out and cement in place.

Assemble four sides and tower on

Photo of station taken from beneath the elevated line it services. A most practical design for all-around use.

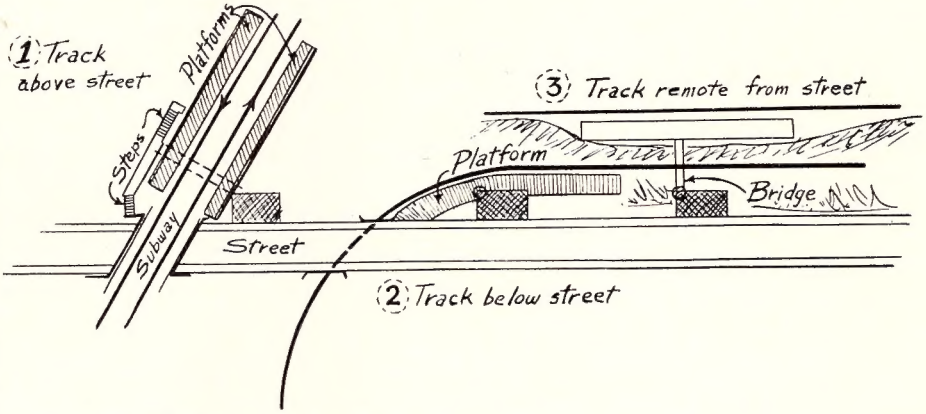


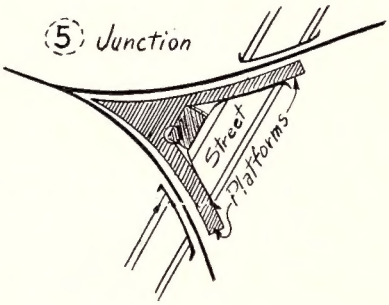
wooden or cardboard base; secure with cement. Add front porch of scribed 1/8" thick strip-wood or cardboard. Make porch roof from scrap cardboard and cement in place, then wrap 1/8" square stripwood with building paper for columns.

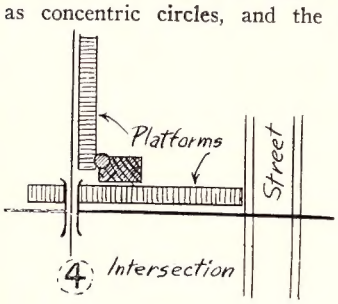
The best bet for the various roofs is to draw the shingles in pencil (silver pencil if you have one) on *black* poster cardboard, because it is impossible to correctly shingle the conical tower roof with building papers. The main roof is the roughest to lay out, because its intersection with the round tower is elliptical. Fig. 7 shows the dimensions it should be but slight variations on your model can throw this off somewhat.

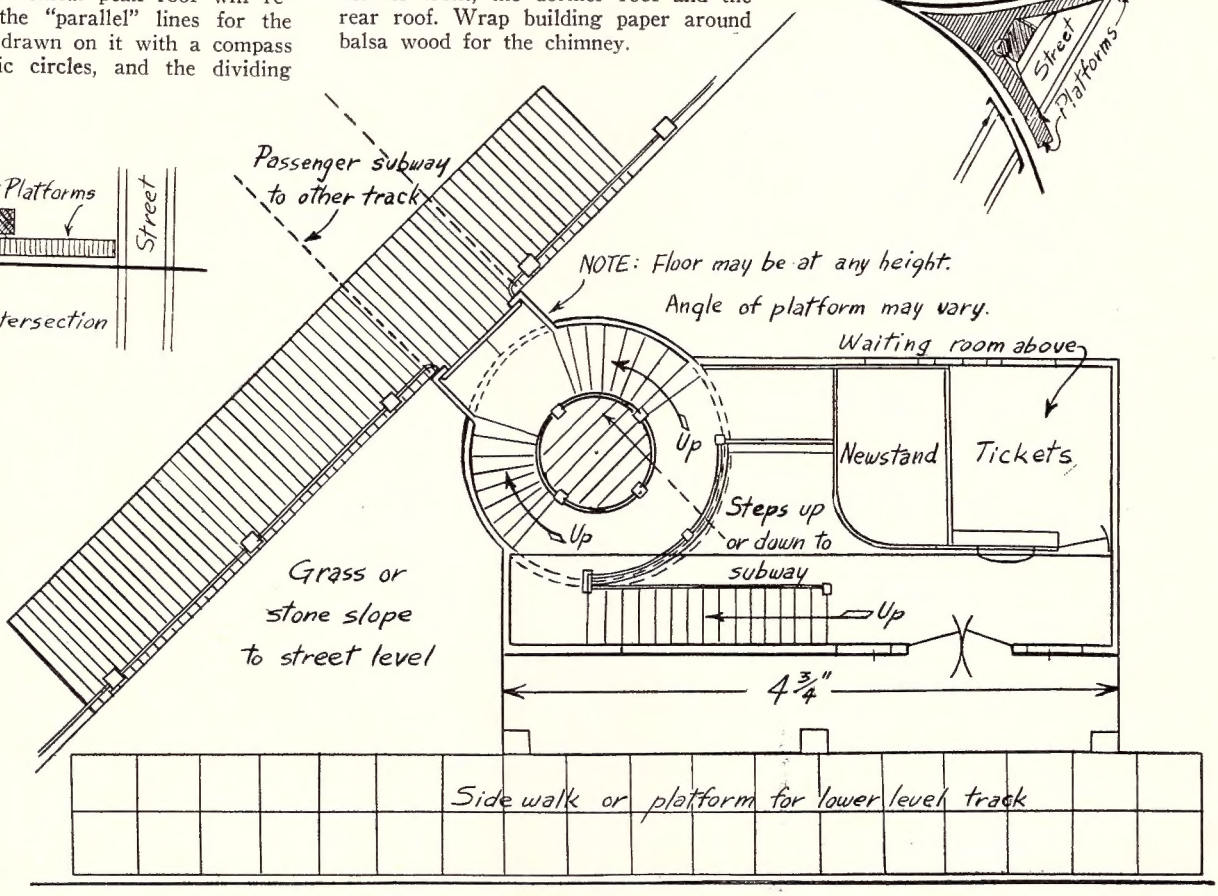
Make the ellipse as shown in fig. 8. First of all you need a loop of thread whose total length is twice the major radius (2 x 2" = 4") plus twice the distance out from center to a focus (2 x 1¾" = 3½") or 7½". To make this loop, push two pins into your drawing board half that distance (3¾") apart and tie a loop of heavy dark thread around them. Now transfer the pins to the foci (plural of focus) of the ellipse, which I have located for you on fig. 7. Loop the string around these, catch your pencil in it and make taut as in fig. 8, then trace the ellipse or as much of it as you will need.

Nothing special about the other two roofs, fig. 9 and 10, except to be sure to have shingles running the right way. Fig. 11, the conical peak roof will require that the "parallel" lines for the shingles be drawn on it with a compass as concentric circles, and the dividing lines between shingles all point toward the center. It will need some rolling so you can "cone" it up, then cement together, using scotch tape inside to help out your fingers. When you mount this roof, put the joint to the rear where it won't be seen. Mount the main roof, the dormer front, the dormer roof and the rear roof. Wrap building paper around balsa wood for the chimney.



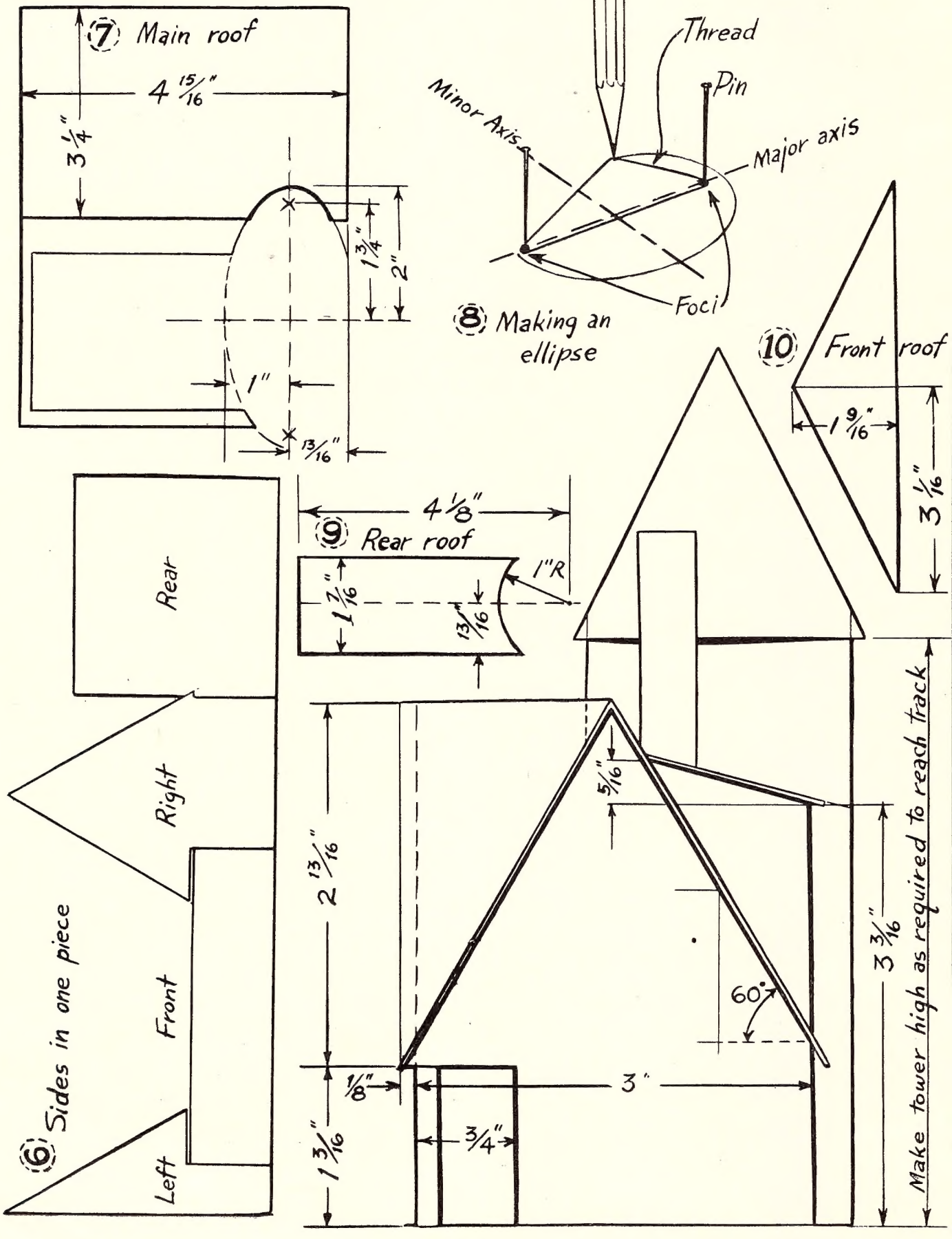


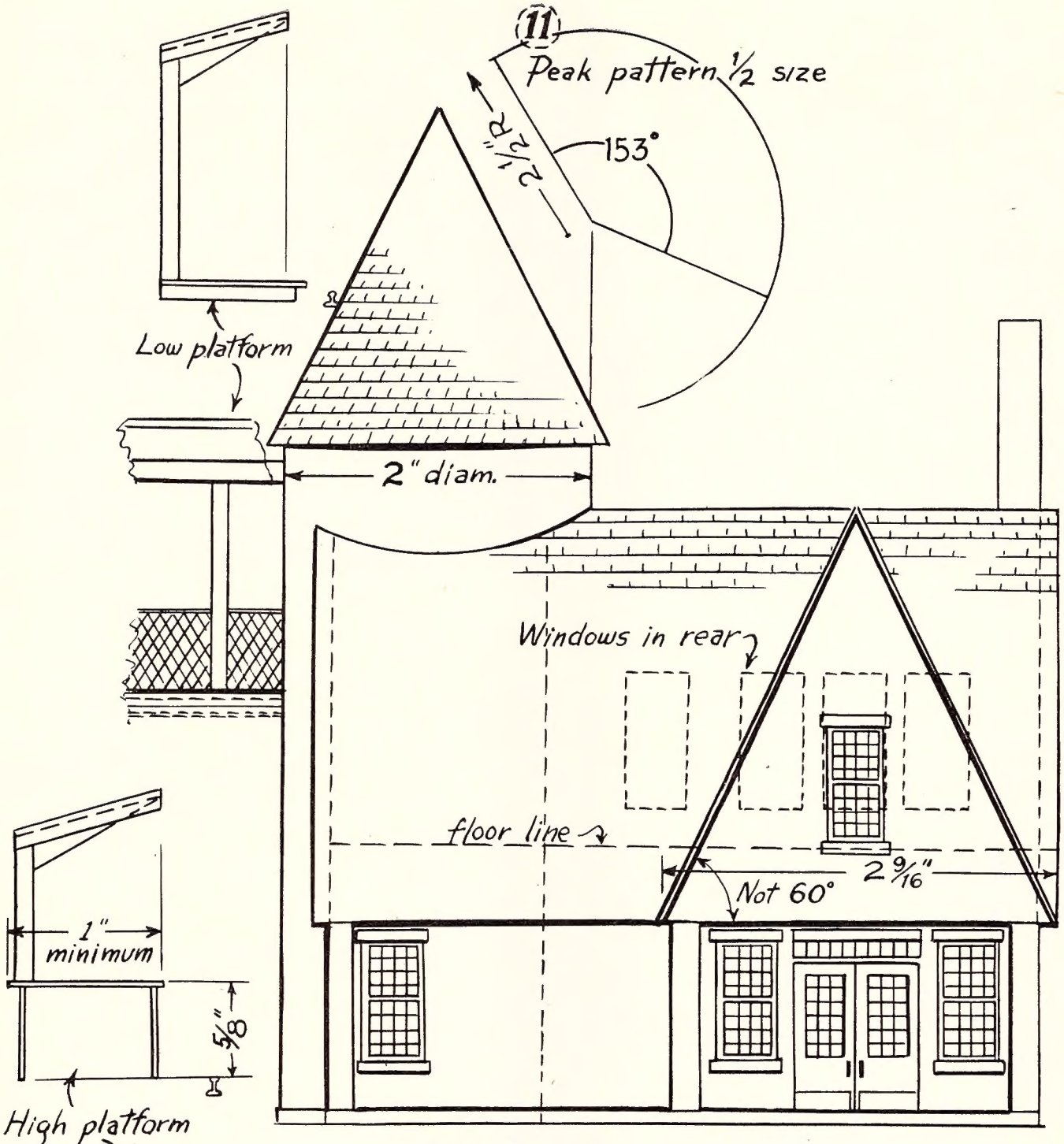




. . . high level station

Dimensions for HO Gauge



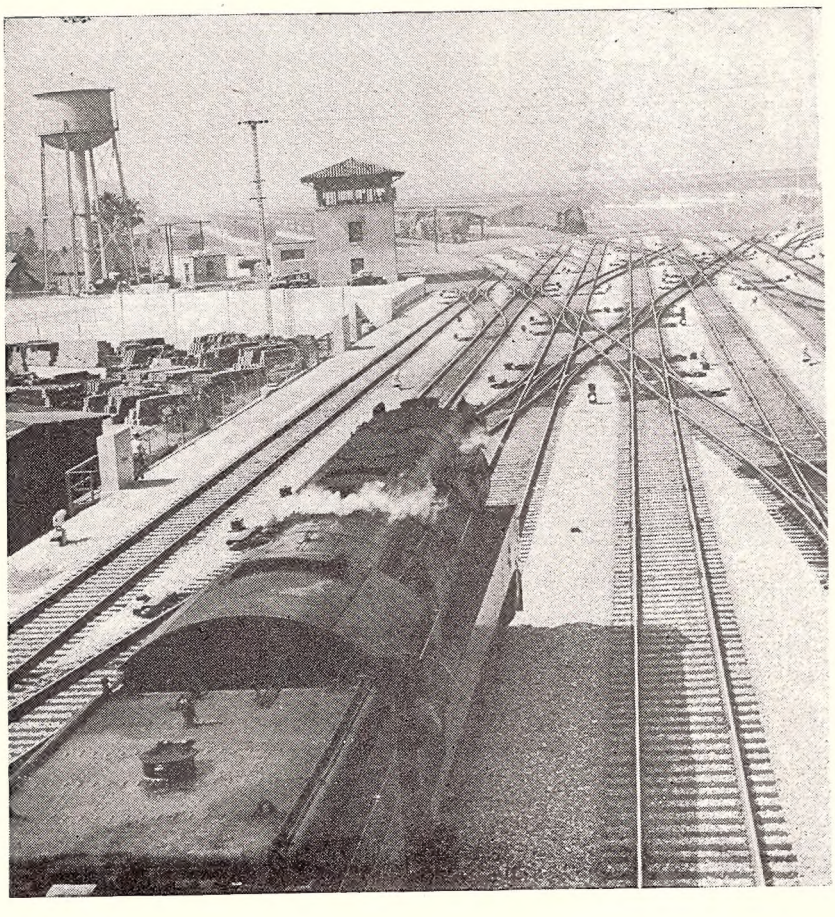


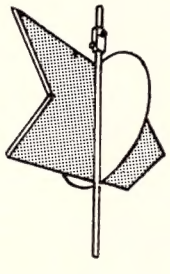
Station Surroundings

I show the design of station platform I used, but you can use anything you wish, including Ideal's platforms or just a strip of ⅛" thick masonite or ¼" plywood painted concrete color. The door into the tower is a small vestibule made of cardboard, with inset doors and glass (like the main station door), cemented on wherever it is required. A passenger footbridge if required could be fabricated much like my station platforms. A passenger subway would of course not need to be shown (one of its virtues).

Fill up any triangular spaces between station, track, and street with a grassy slope, a retaining wall, a stone slope, or even a rock garden if you care to indulge. There might even be place for a lunch wagon or news-stand. Outside stairs would be in order to long platforms and for them try to find some of Varney's step section. This milled wood piece is apparently out of production, but I am hoping that enough of you will set up a clamor for it to get Varney or somebody to start the saws moving again. You might also like to make up an open air stairway, something like an elevated line has, and for that I refer you to my article on Elevated in HO in the Model Craftsman for June, 1945. You might also be interested in Building an HO Elevated Train in this magazine for December, 1942; January and February 1943. Ever try running an HO train from outside third rail? Some fun! . . . *By Bill Schopp*

▲ The "Sunset Limited," one of the Southern Pacific's crack trains, crossing the Rio Grande into El Paso enroute from Los Angeles to New Orleans. This setting would be ideal to model. Note how the trackage cuts through the hill at left rear, the low auto bridge and general terrain.





◀ Here's another view of Southern Pacific equipment, a "general service" 4-8-4 streamlined steam locomotive about to enter Los Angeles Union Terminal. The covered station platforms can be seen just to the right of the control tower. Note the maze of switches all controlled by the tower operator.

Scenes along prototype railroads that can be readily duplicated in miniature or adapted to the needs of your own model pike. Send your photos, with complete details, to the Protopix Editor, Railroad Model Craftsman, Ramsey, N. J. $5.00 for every photo used.

protopix

◀ An old wooden coach, with trucks and couplers removed, serves as home for yard workers. For privacy, many of the windows have been boarded up. Here is an idea that can be quickly duplicated by using a truckless car kit. Like the prototype, it should be located in the immediate area of a freight or passenger yard.

▶ That's not a chicken coop being shipped via the Texas Mexican Ry., it's actually a caboose, built in the Company shops back in 1918. This line is relatively small, total trackage of 162 miles; it operates one passenger and several freight trains in each direction daily. This is a standard flat car with hand railings added together with the conductor's "house."

▼ Well-kept passenger facilities on the P&LE R.R. at Beaver, Penna. Both east and west bound passengers are provided with covered station platforms which could be duplicated with strips of pine and cardstock. Adhesive tape could serve as the steps to subway.

. . . eastbay electric

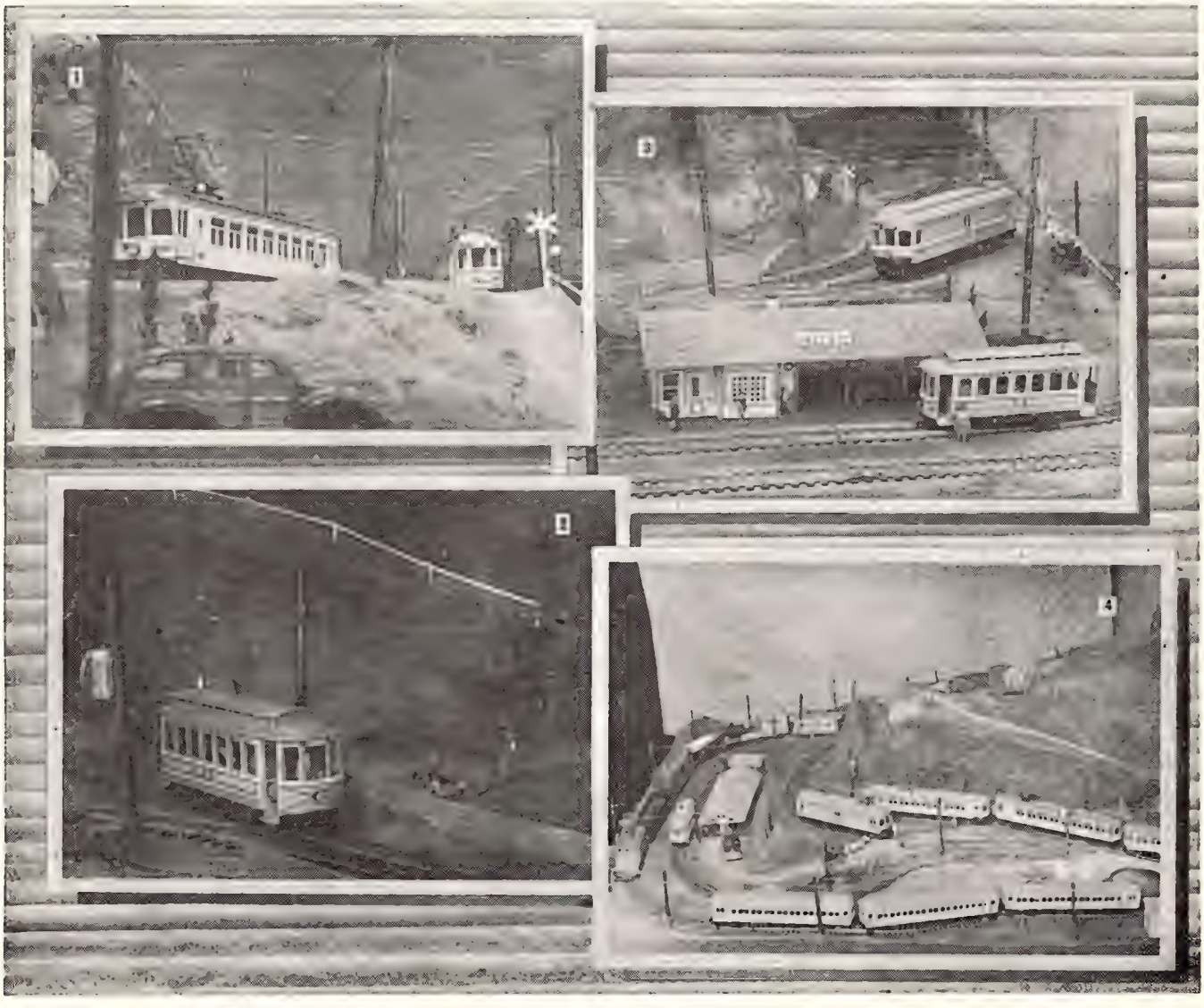
A PHOTO-STORY

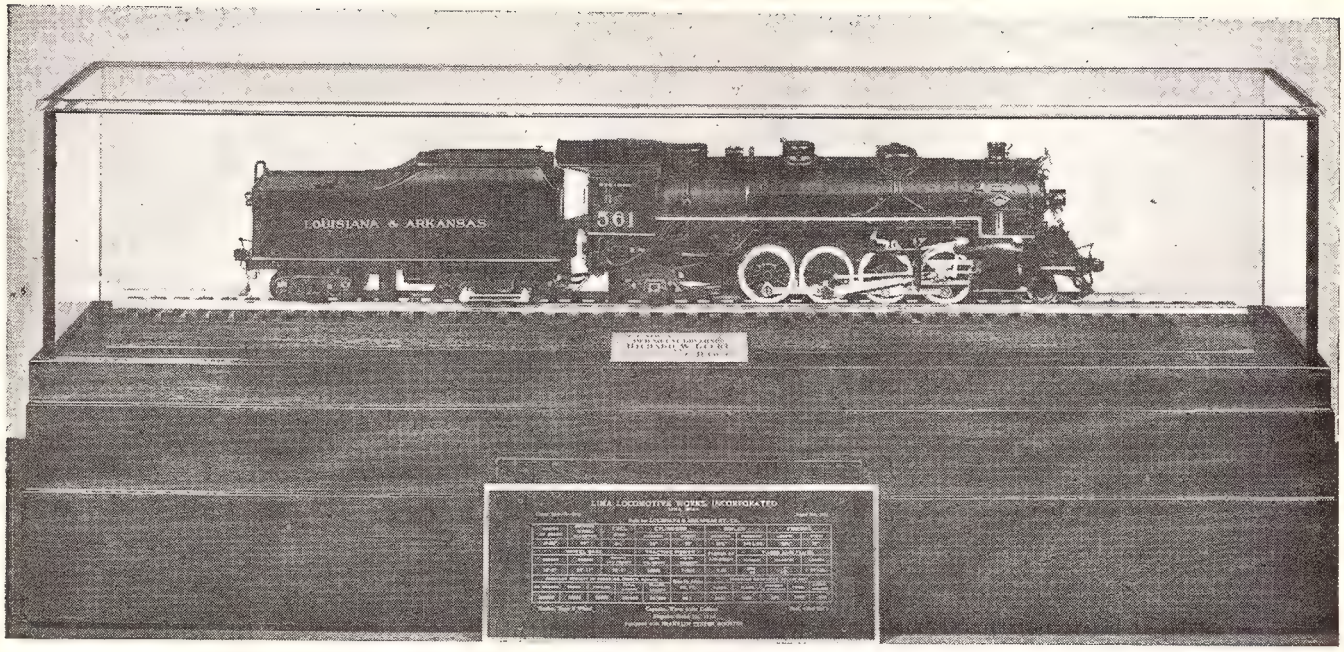
PHOTO 1
A view from below track level is always effective in model railroad photography and modeller Bob Dangel has made good use of it here. The heavy interurban combine, in the grand tradition, is equipped with both a pole and a pantagraph and can operate from either on the superb overhead wiring system. "Yes," Bob says in response to frequent inquiries, "they really do pick up current from the trolley wire." The vertical lettering on the crossing sign post is an unusual detail. The signals, though only dummies, lend sparkle to the layout with their jewels.

PHOTO 2
The San Francisco Bay area is rife with memories of once great electric lines—Sacramento Northern, Northwestern Pacific, Interurban Electric, Key, Ocean Shore. So it is not strange that trolley model fans abound there. One such is Bob Dangel of Oakland whose three by four foot exhibition pike in HO gauge was described at length in September 1951 RMC. #49 shown here was one of the first cars on the line, but thanks to careful maintenance is still in service. In this photo she passes a hobo constructing mulligan stew in the shade of an orange tree.

PHOTO 3
One reason business is so good on the Eastbay Electric is the horse and buggy character of the highway competition. The express motor on the high level here has nothing to fear from the loathsome stinkwagon. Directly in front of the station sign may be seen two rail gaps which are part of the automatic control system, devised to work entirely without relays.

PHOTO 4
County Fair Day on the Eastbay Electric means stripping the barn of all equipment since three car trains must be run to accommodate the crowds. Add freight traffic to this and you'll understand why brass hat Dangle needs automatic control. The steeple cab locomotive at extreme left was built up in the company shops. You'd scarcely guess from this photo that the entire table measures only three by four feet. All photos by Bob Dangel.





One of the many prize locomotive models built by Alexander. This O gauge model, detailed to the N'th degree, is on exhibit at the Lima Loco Works.

. . . locomotives of america

Motive power that played a leading role in unifying our country, providing every corner of America with first rate transportation service. This month the author presents two popular ten-wheelers.

by E. P. Alexander

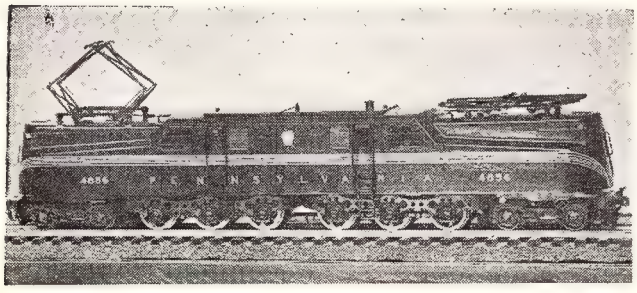
LOCOMOTIVES are probably the most popular single items on a model railroad and are usually the center of attraction. Many builders feel that scenery, buildings and even cars are mere accessories to add realism to their miniature locomotives.

Years ago, when the hobby was young, a railroad modeler had to make every locomotive part; all manner of detailed parts were fashioned in his home workshop, intricate pieces such as the motor, drivers and valve gear. Naturally, no two models were alike as the builder used his own discretion as to scale, type of motor and other fundamentals.

As the years passed by and more enthusiasts entered the hobby, it was only natural for these men to get together and exchange building information and parts. Perhaps one builder was particularly adept at casting and turning locomotive drivers; he turned these parts out in profusion, exchanging them for other equally hard-to-make accessories. As his skill increased, he entered the manufacturing business on a part time basis, selling drive wheels to all interested parties. Thus, briefly, was the model railroad industry born.

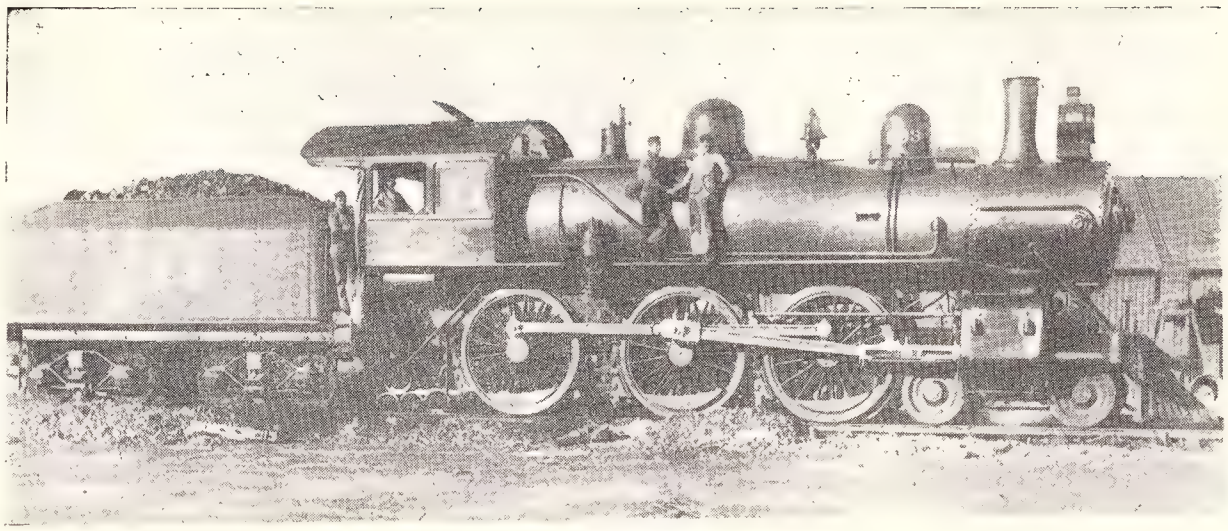
From this humble beginning, about twenty years ago, the model railroad industry has really mushroomed. Today there are commercial kits available for most every popular locomotive type. Many of these can be assembled in a few hours time with but a knife and a screwdriver.

These commercial kits are a true credit to the industry; when assembled, they are well detailed scale models. For more enjoyment, however, try adding other detail to these locomotives or possibly convert them to other prototype standards. With the aid of commercial parts, the complete appearance of an engine can easily be altered realistically. On the following pages are reproduced illustrations of two ten-wheelers. Other locomotive types will be shown in future months.



Power to spare in this giant electric, an accurately scaled O gauge model. Most of the parts for this beauty were made in the author's shop.

This streamlined steam type locomotive was built on order from the New York Central System. It is built of sheet brass and well detailed castings.

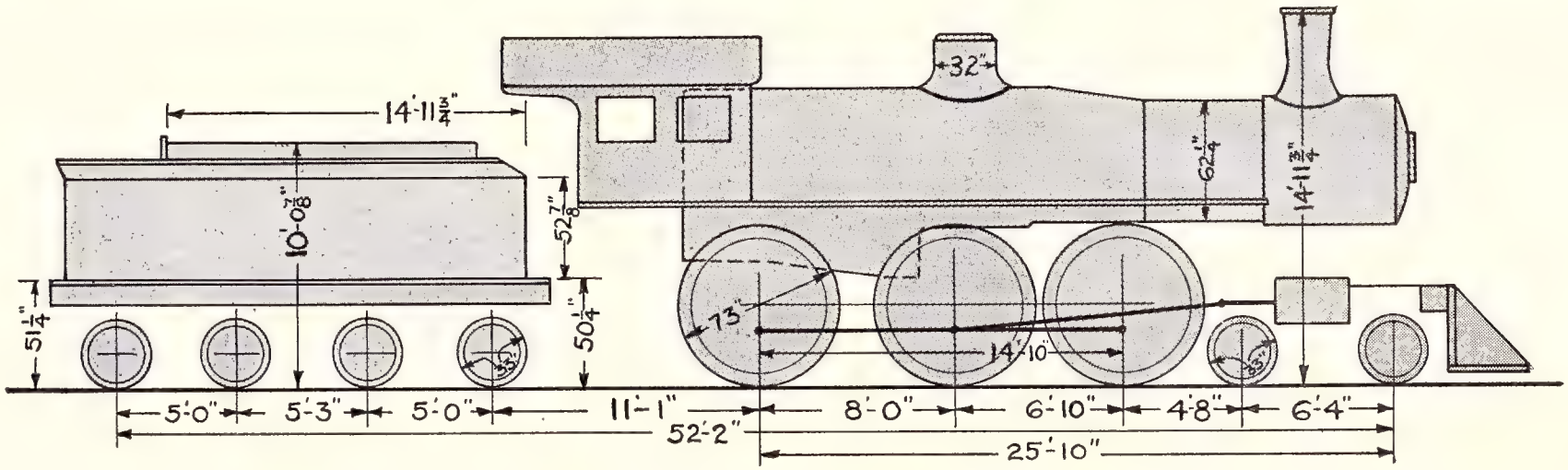


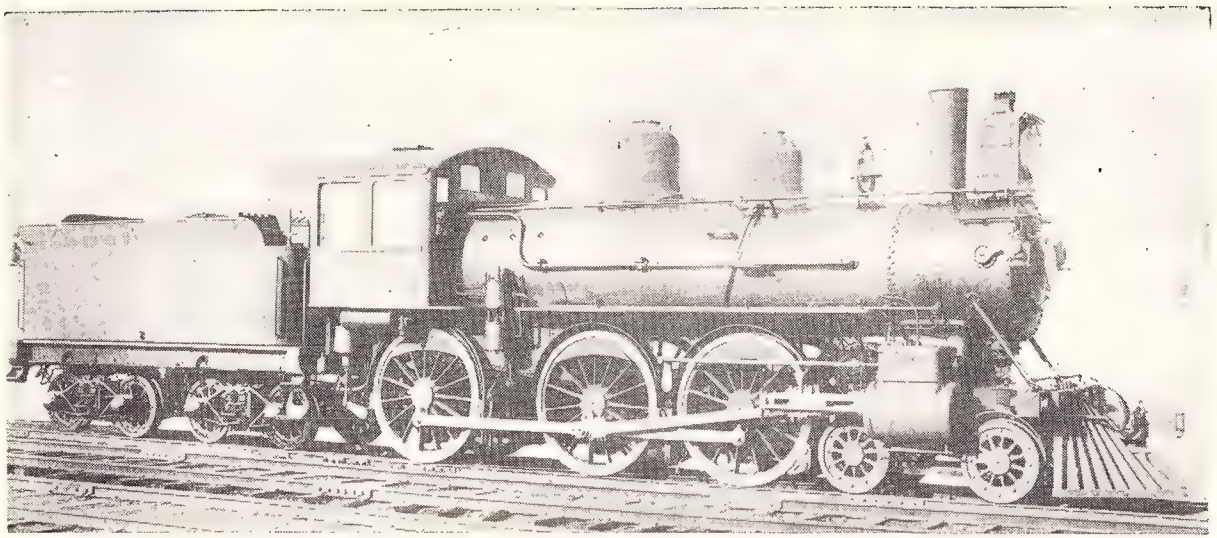
This compound ten wheeler was used in passenger service, particularly on the North Coast Limited which first went into service in April 1900. There were eight engines of this class numbered from 229 to 236 and they were rebuilt as simple machines. All are now dismantled.

Builder—American Locomtive Co.
Cylinders—20" x 26"
Weight, light—248,100
Steam Pressure—200 lb.
Fuel—9 tons
Water—4350 gal.
Dia. Drivers—73"
Tractive Effort—24,200 lb.
R.R. Class—P-1

1901

Northern Pacific No. 233 4-6-0





Another ten wheeler, designed and built back in 1896, used primarily in fast passenger service on the old L.S. & M.S. Railway. This locomtive, one of the finest of its day, was rebuilt several times and has since been scrapped. Today, model builders find these old ten-wheelers one of the most popular locomotives, regardless of gauge.

Cylinders—18" x 24"

Steam Pressure—200 lb.

Fuel—9 tons

Water—4000 gallons

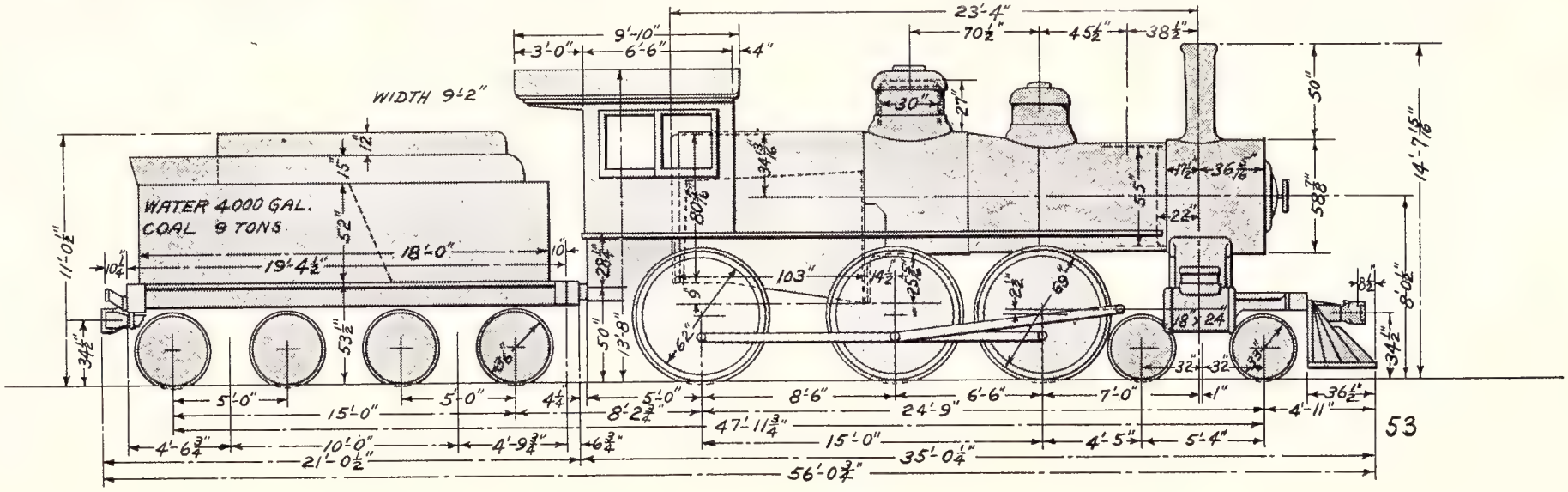
Dia. Drivers—69"

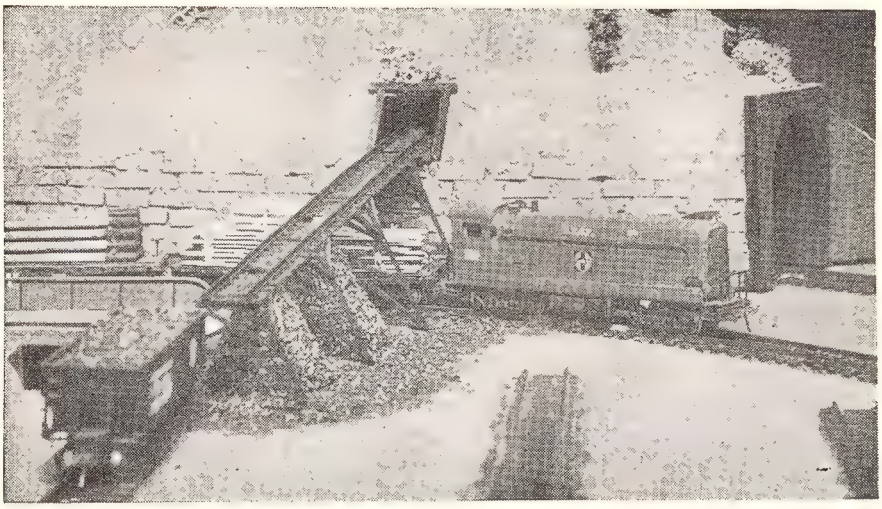
Overall Length—37' 8"

Overall Height—14' 7 15/16"

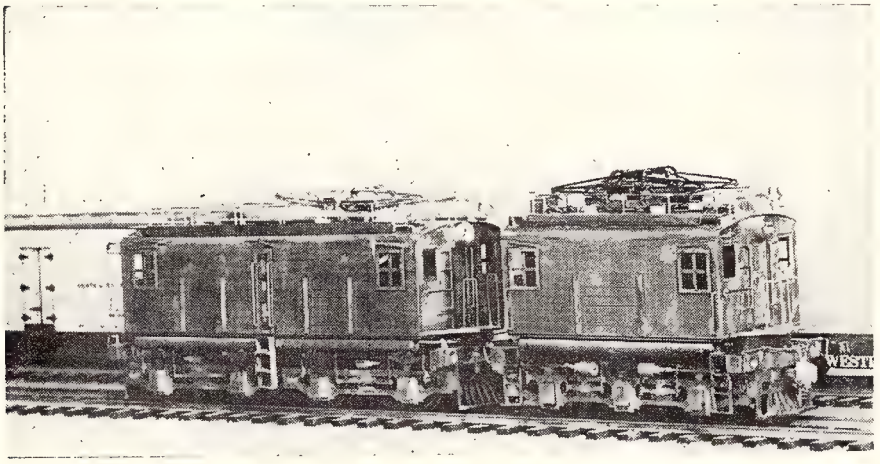
1896

L. S. & M. S. R'y No. 107 4-6-0

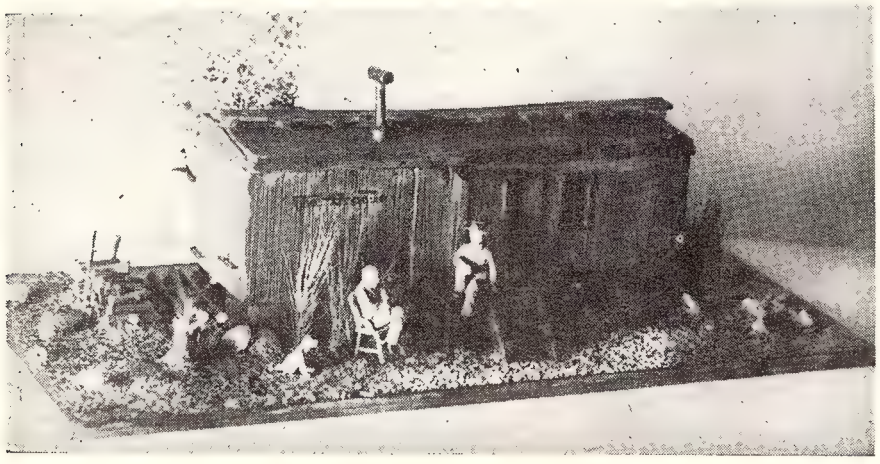




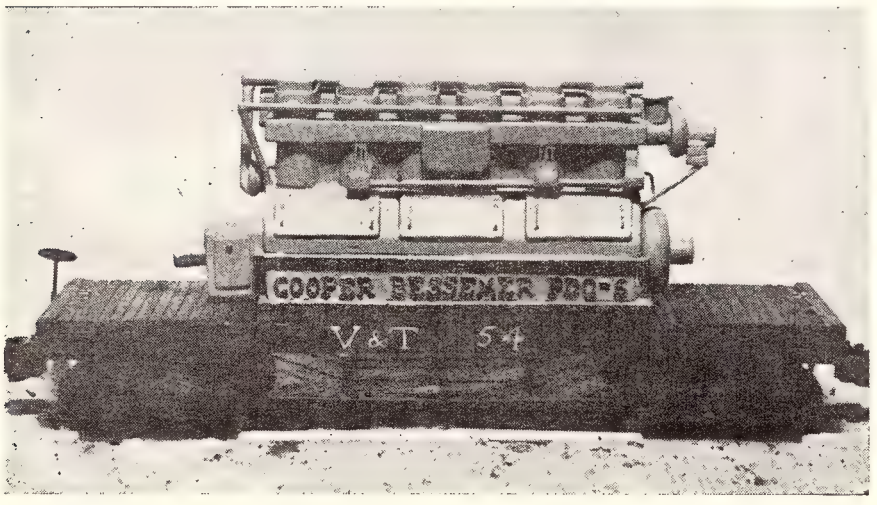
Non-Operating coal mine on the extensive layout built by George Ledward of Detroit, Mich. The two tracks in background completely circle the layout, tracks to the right are uncompleted industrial sidings. Future plans call for a belt conveyor system to load gondola cars and various mine structures.



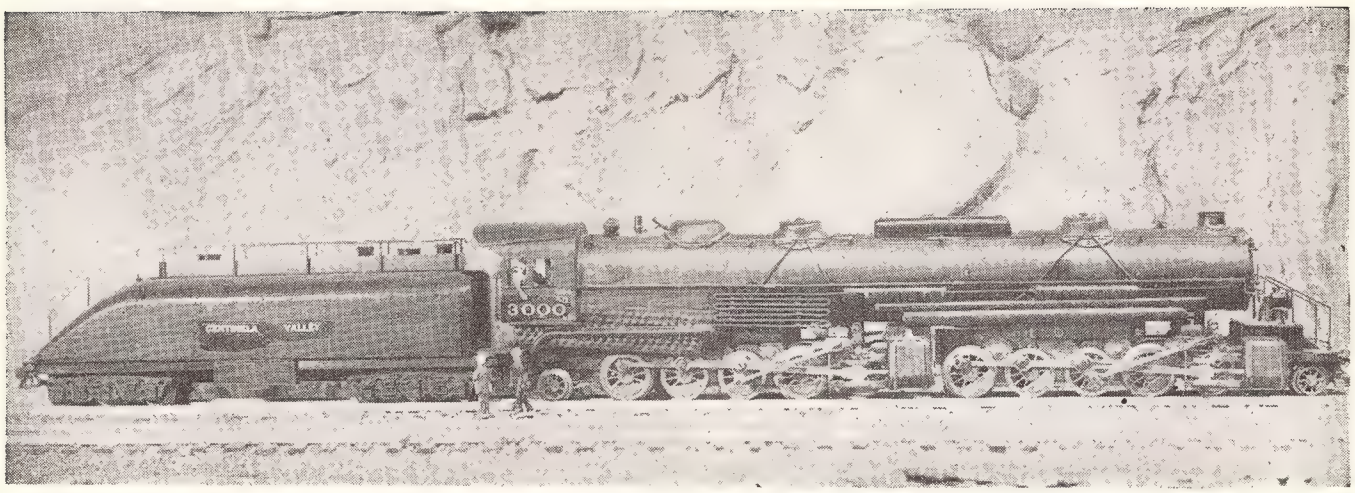
O Gauge Electric Power built by Norm Huber of San Jose, Calif. These huskies, ready for the paint shop, were built from plans appearing in back issues of Railroad Model Craftsman. The models were built primarily of brass and have working pantagraphs. The 0-6-0 version received second prize at a recent NMRA Pacific Coast Regional meet.



This interesting trackside structure will soon be installed, as a unit, on the HON3 layout operated by Hubert Young of Lafayette, Ind. A body kit has been propped up on small wooden blocks, given a weather-beaten effect, with many small details added to the exterior to create a life-like appearance. Note the pile of wood and other logs ready for the ax.



An O gauge Virginia & Truckee flat car built from plans appearing in Nov. '51 by Dale White of Grove City, Pa. The body is of pinestrips with individual floor planks of basket wood. The diesel engine was an afterthought, fashioned from blocks of balsa. Right after lunch the loading crew will go back to work and secure this interesting load.



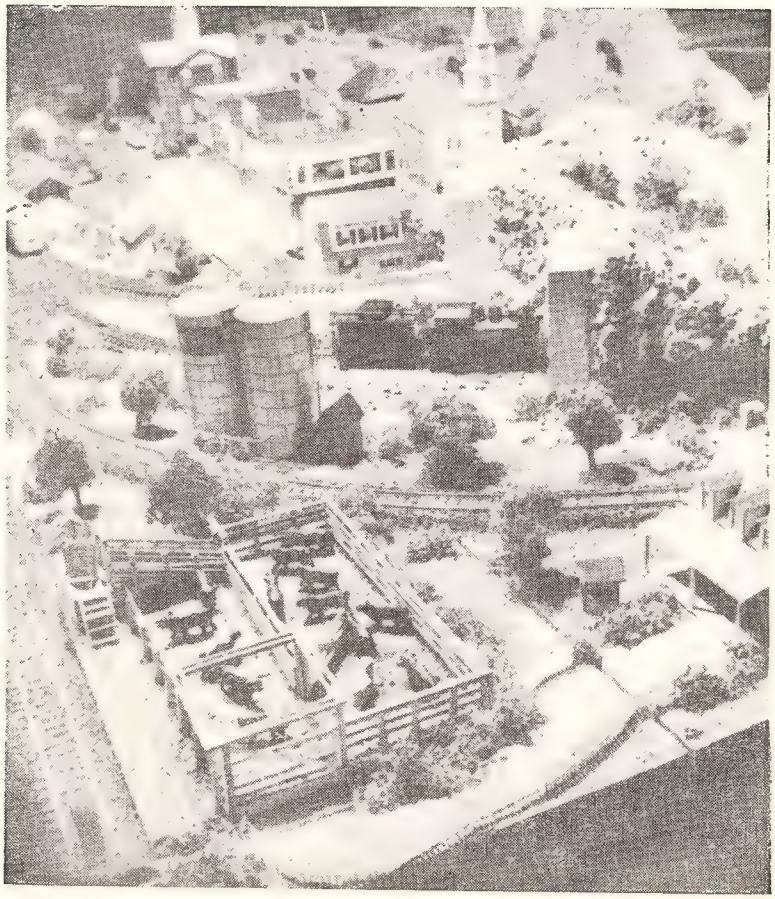
Power to spare in this O gauge giant, built by Lee P. Ridgeman from parts fashioned in his own home workshop. This is but one of the many different locomotives which service the Centinela Valley Railroad.

YOUR NABOR'S PIKE

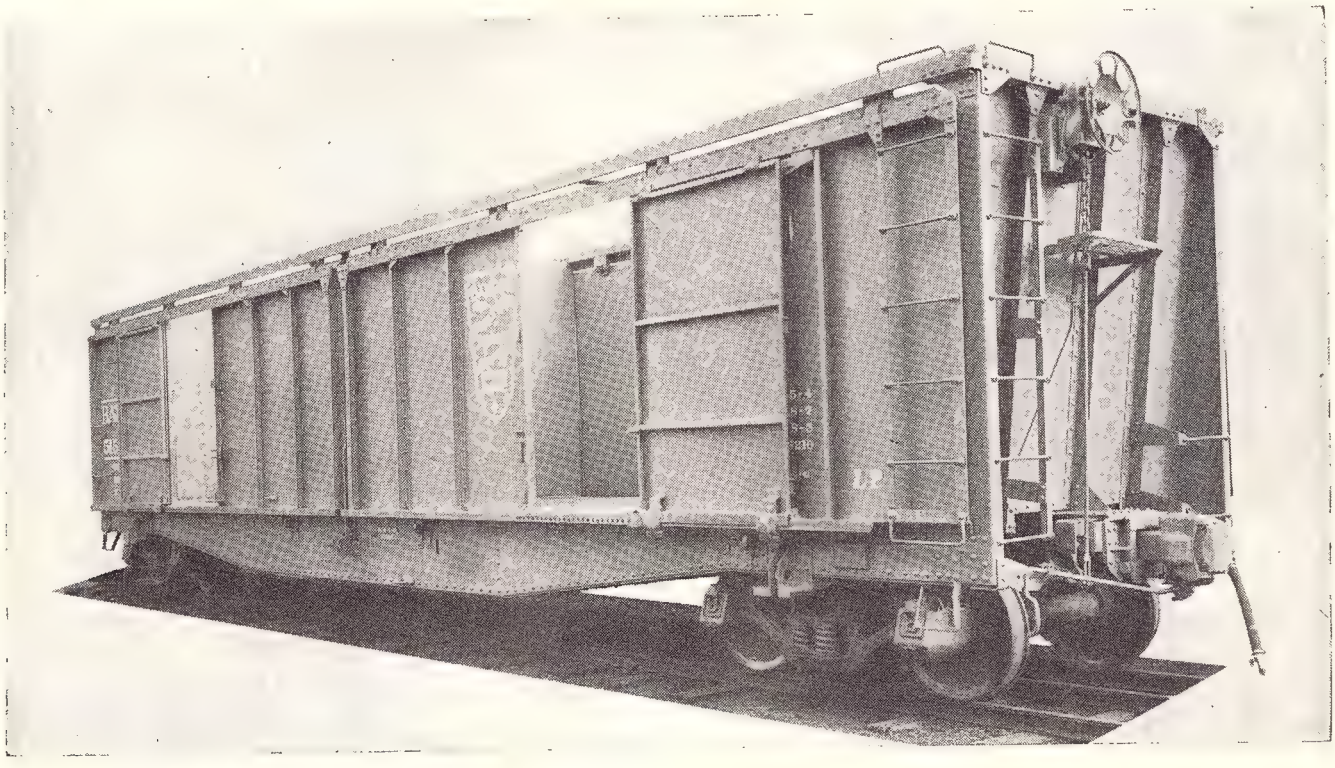
SEND US YOUR PIX FOR $5

WANT FIVE BUCKS?

That's the minimum we pay for photos and captions appearing on this page. Photos are selected on a basis of reader interest and good photography—you are not limited to some super-detailed model so don't be bashful, your photo may be the next to appear on these pages. Please include all pertinent information regarding scale, materials and other interesting facts. Here's a good chance to let your "Nabor" see your work and make some easy money in the bargain. Send material to Picture Editor, Railroad Model Craftsman, Ramsey, N. J. Photos returned on request. Send in yours today.



This six by ten foot HO gauge layout, built by Jack Mamula of Interlaken, N. J., features plenty of diversified operation. In this scene, the Mantua "Busy Bee" is about to pick up several cars from an industrial siding.



. . . B & A pulpwood cars

A waterway is one of the most interesting scenic devices possible to include on a layout. These cars will help you create a new industry along that stream to provide plenty of operating pleasure.

by Bill Willmore

A VARIETY of material is moved daily by our country's railroads, products of every shape and size. To speed up delivery and handling of this freight, many unusual type cars have been developed; the gondola for loose material, the stock car, tankers, depressed center flats and . . . pulpwood cars.

These pulpwood cars were developed though the combined efforts of the Bangor & Aroostook RR, the Magor Car Corp. and the Great Northern Paper Co. in an effort to lower the cost of handling cordwood. Before these cars appeared, pulpwood was carried in box, gondola, rack or flat cars and unloaded by hand.

An experimental design of side discharge pulpwood cars was woked out and the car built by the B&A. Initial tests with this car indicated definite potential economies and the Paper Co. developed a design of car dumper which in its final form was installed at their mill. When the dumper project was worked out, the B&A ordered 100 side-discharge pulpwood cars of 50 tons capacity and, when these had proven their economy, an additional 100 were ordered. These were built by the Magor Car Corp.

The cars are of steel plate construction, assembled by rivets. Since the entire sides of these cars are doors, the underframe carries the load on fish-belly center and side sills of approximately the same center depth.

Car ends are single inside sheathed with intermediate and center zee stiffeners and pressed channel corner posts. The corner posts are tapered to a sufficient width at the bottom for substantial attachment to the side sill, the outer edge being vertical and the inner edge sloping outward toward the top. The end floor sheet is flanged across the car to take the bottom edge of the end sheet. Reinforced slots are punched in the end sheets at diagonally opposite corners of the car to serve as escape ladders from inside the car.

Ends are connected at the sides of the car by full partition. Two additional spacers are placed between the side plates half-way between partition and car ends.

Each side is made up of two swinging doors, hinged on the side plate and extending from center partition to the end of car. Each swinging door is carried on four cast steel hinges and carries two pocketed castings at bottom, or closing edge, which, when the door is closed, nest over male castings welded to the side sill. These nested castings resist longitudinal motion of doors due to draft or buff. Doors are held in a closed position by latch hooks which work against flanges on the nesting castings. Each swinging door carries a built-in sliding door with bottom rollers, covering a 4′ 6″ door opening. The sliding doors can be opened by a pinch bar working in a series of holes in the bottom member of the swing door in case they are jammed by the lading.

Operation of swinging door latch hooks can be accomplished either manually or automatically. Hooks are connected by adjustable links to levers on rotating shafts, one shaft on each side of center sill. Each shaft is continuous, operating all latches on the side of car which it controls. In automatic operation on the dumper, a plunger working against a return spring is pushed up by a tripping device. This plunger rotates one of the shafts, thus releasing both doors on one side of the car. Since there are two plungers under the car, each operating doors on one side only, dumping is selective as to direction, so that cars may still operate on the one-direction dumper regardless of being turned in handling. For manual operation, each shaft can be rotated by a linkage from a lever which is normally locked in a vertical position against the end of the center partition.

Loading operations on an off-used siding of the Bangor & Aroostock Railroad. The pulpwood is loaded by conveyor, destined for large paper mills.

There are two such levers, one on each side of the car. As a safety measure, each lever releases only the door on the opposite side of car so that lading can't be dumped on the opreator.

Combination jacking pads and hold-down brackets are located at each end of each bolster. Hold down brackets are engaged by a removable pin to restraining mechanism built into the car dumper thus locking car to the rails during unloading. The trucks are unit type with cast steel bolsters and double-truss frames.

Unloading facilities

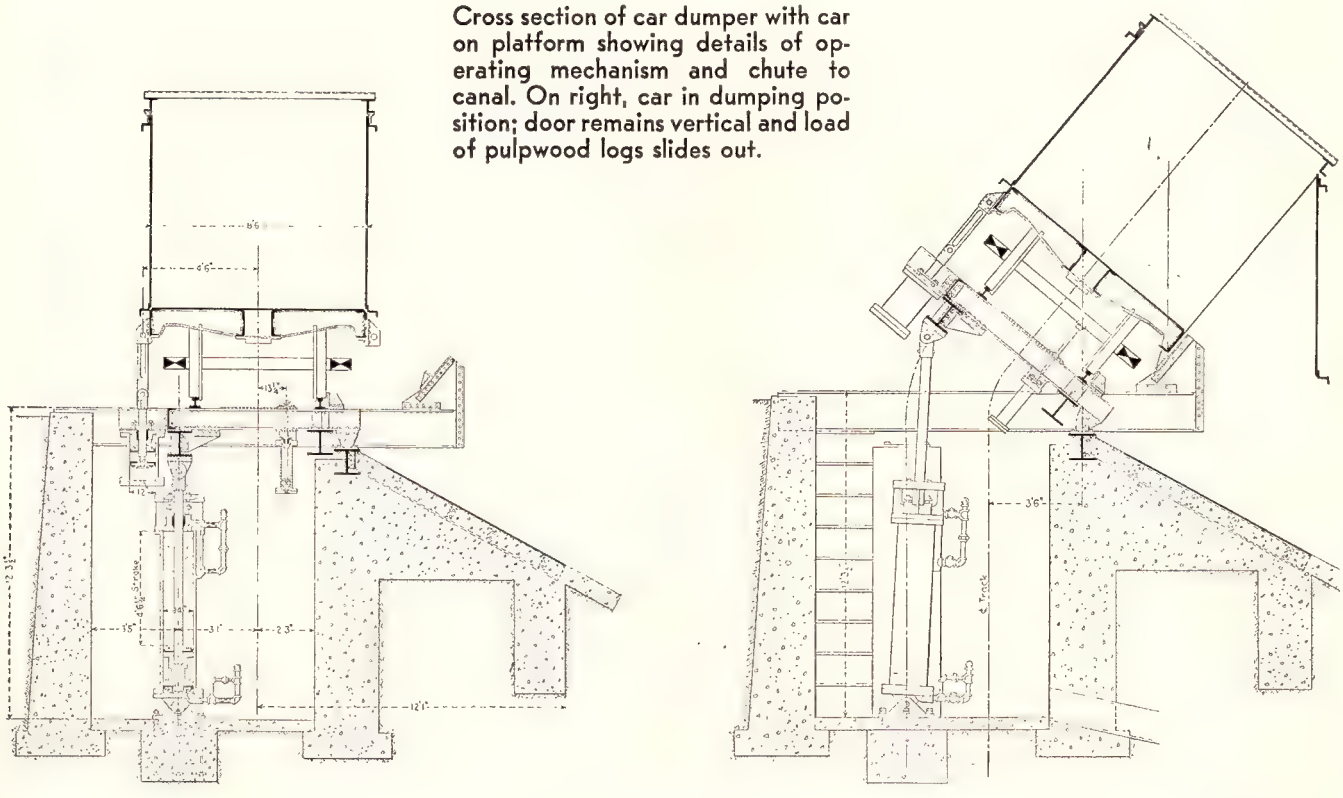
Because the swing doors extend the full length of the car, side ladders are attached to the door with the exception of the top grab which is on the side plate. Roping staples, to secure the load, are applied at the bottom of each side sill near the car center. Brakes are of the conventional AB type with truck connections passing through the bolster. Plans for the car are shown full size for S gauge; they can easily be photostated for use in other scales.

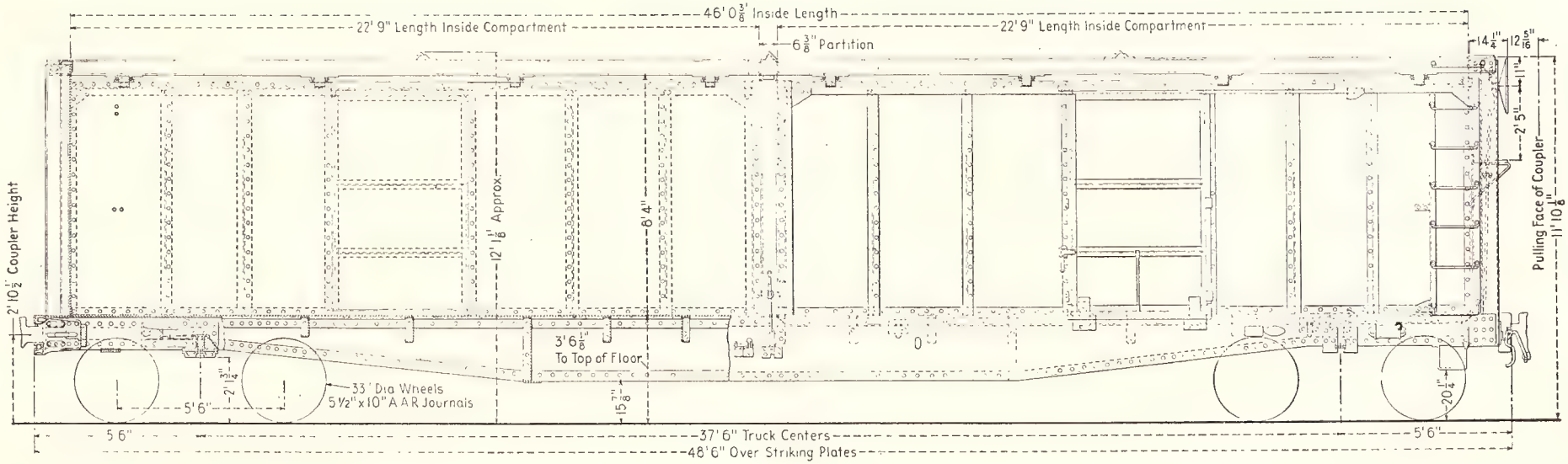
Other drawings are shown which give the general design of the car dumper. This is comprised of two platforms 8' 6" long by 9' 5" wide, one under each truck of the car, hinged to tilt to a maximum angle of 39 degrees. These platforms, with the car, are controlled in their movement by hydraulic cylinders.

Unloading operations are most interesting. The pulpwood car is run onto the tilting platforms of the dumper, uncoupled, and held to the rails by locking bars attached to lugs on the side of the car. The locking bars are hinged to jaws on the ends of the pistons of two hydraulic holding-down cylinders secured to the dumper platforms. Once the car is locked to the platform rails, another hydraulic cylinder actuates the locking mechanism of the doors, pressure is applied to the jacking cylinders and the dumper platforms and the car are tilted. Structural brackets on the dumper platform are located in such positions as to permit the side sills of the car to rest on heavy angle supports when the platforms are tilted to the maximum angle in the dumping position. In this position, the contents of the car slides out onto a steel plate and concrete deck with a slope of 6" in one foot from which the pieces of pulpwood roll out into the canal leading to the mill. Hydraulic pressure is supplied by three motor driven gear pumps, controlled from an adjacent shelter.

After the load has been dumped, the movement of the jacking cylinder pistons is reversed; the car is lowered, door locked and the car ready to be pulled ahead to make room for the next load. Total time for the entire operation is less than ten minutes.

Cross section of car dumper with car on platform showing details of operating mechanism and chute to canal. On right, car in dumping position; door remains vertical and load of pulpwood logs slides out.



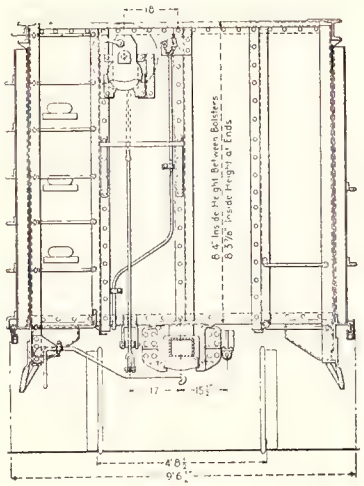


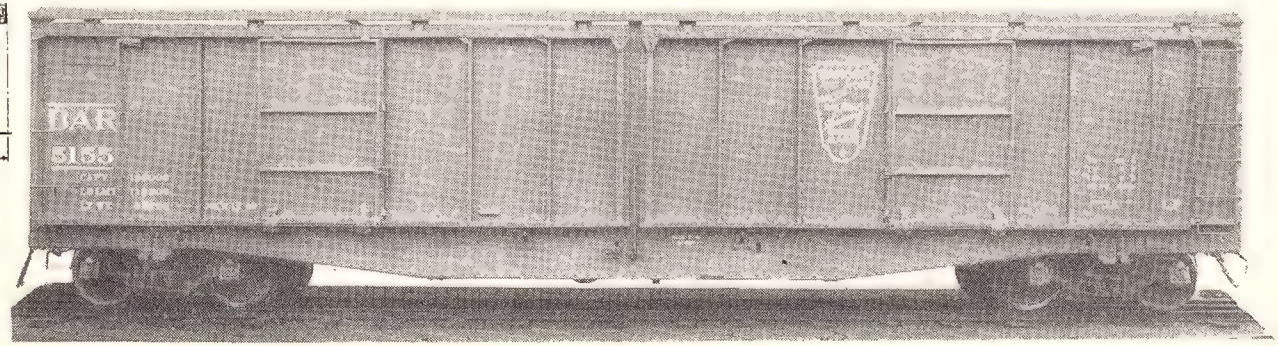
. . . B & A Pulpwood Cars

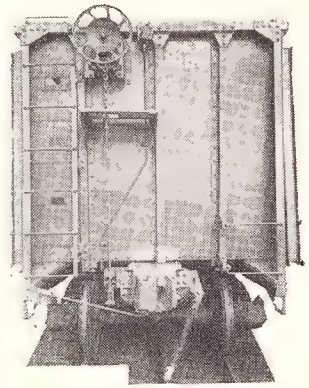
Courtesy of Magor Car Corporation

PLANS SHOWN 3/16" TO THE FOOT. FULL SIZE "S" GAUGE

One of two hundred pulpwood cars made by the Magor Car Corp. for the B & A Railroad. Either a working or non-operating model would be a swell addition to any model railroad. Build it from scrap materials.







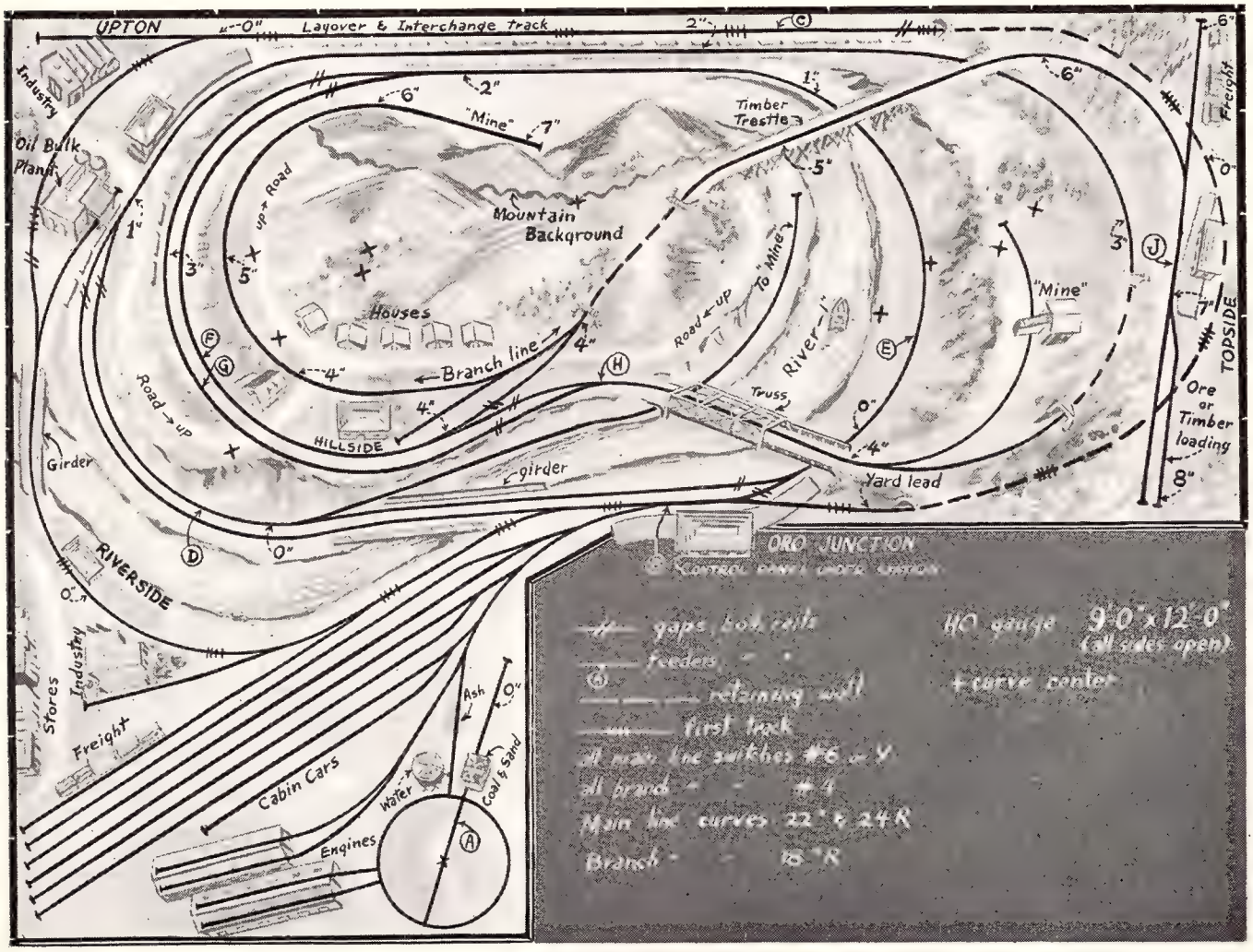
THE LAYOUT DOCTOR

Here are three layout designs which provide operation in and out of yard areas without tying up main line trackage . . . all through the use of an oval yard lead. This type of track pattern will guarantee maximum operation in small space.

THE more one works with model railroad layouts, the more basic ideas work themselves to the fore. One such was the problem of *no ducking under* explained in these pages last year, with the resulting *accessibility* or *maximum reach* to trackage—especially switches.

A second idea is that model railroad operation is NOT like real railroad operation in all respects. I have expounded, in past years, the unsatisfactory characteristics of a strictly point-to-point system. No sooner do you leave one end of the line than you arrive at the other end, so that *all* your activity is yard work—sounds like fun, but you soon yearn to let 'em run for a while. It is all very well to write and to read treatises on *operation* of a medium sized layout wherein train #1 leaves A, meets train #2 at B, passes #99 at C, meets #4 at D and then does local switching at E, F, and G. That kind of operation sounds like fun and *it is* if you have six hands and three brains, if distances between stations are long enough for you to think what to do next, or if you are one of several operating the layout. What is needed, I always say, is a layout designed so that a continuous run—an oval if you please—can be made and you can just sit back and watch the trains run, maybe make up a new train in the yards, maybe figure that it looks like there will be a meet at B, perhaps fool around with a branch line.

My third big idea, partly an outgrowth of the second, is the oval yard lead. Both prototype and model railroad practice



frown on having a yard open right off a main track so that a switch engine constantly fouls the main line while working the yard (yes, it is permissable on a one-horse railroad and I mean just that—where you will only have one *iron* horse working). At the same time provision should be made for getting either clockwise or counterclockwise trains in off the main line and shifting them into the yard, the road engine proceeding to the roundhouse. An engine escape crossover near the end of two of the yard tracks accomplished the latter for *one* direction, but engine escape crossovers waste two otherwise useful yard tracks.

An oval yard lead solves all this. Connected to the main line by a pair of crossovers, trains can enter the lead from either direction. The main line can then be used for engine escape, to get around the train, but the more practical (but unrailroadlike) way to do this is to run the engine completely around the oval to the rear of the train. This is especially handy while another train is racing around the main line so that it would be difficult to use it for backing around a train. You see the train pulls in on the lead (not into the yard), whereupon a switcher (or the road engine if at the right end of the train) cuts the cars up and places them in the yard. Similarly trains are made up on the yard lead, road engines coupled, and off they go. Most model railroad fans cannot afford the space for separate arrival and departure yards and must work for the most part from a stub type storage yard serving for both storage and classification, while the yard lead does for both arrival and departure.

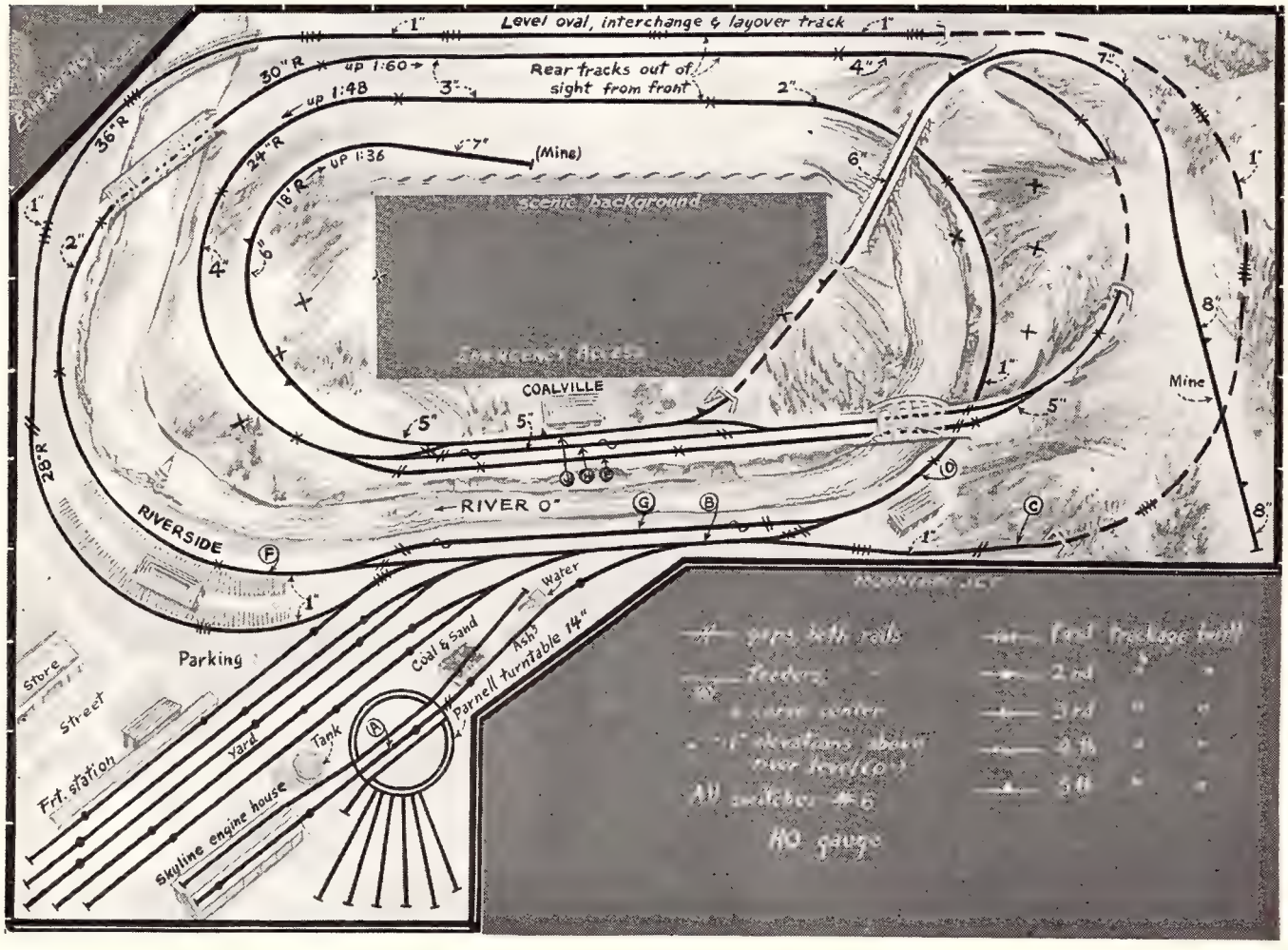
A flaw in many model railroads is that there is no place for the cars to go away from the railroad. Real roads *interchange* with connecting roads. We can do this too in model railroads if we have an oval yard lead. Cars can be shoved around to the back part of the lead. They can then be picked up from *either end* and brought back to the yard after their trip to "remote parts".

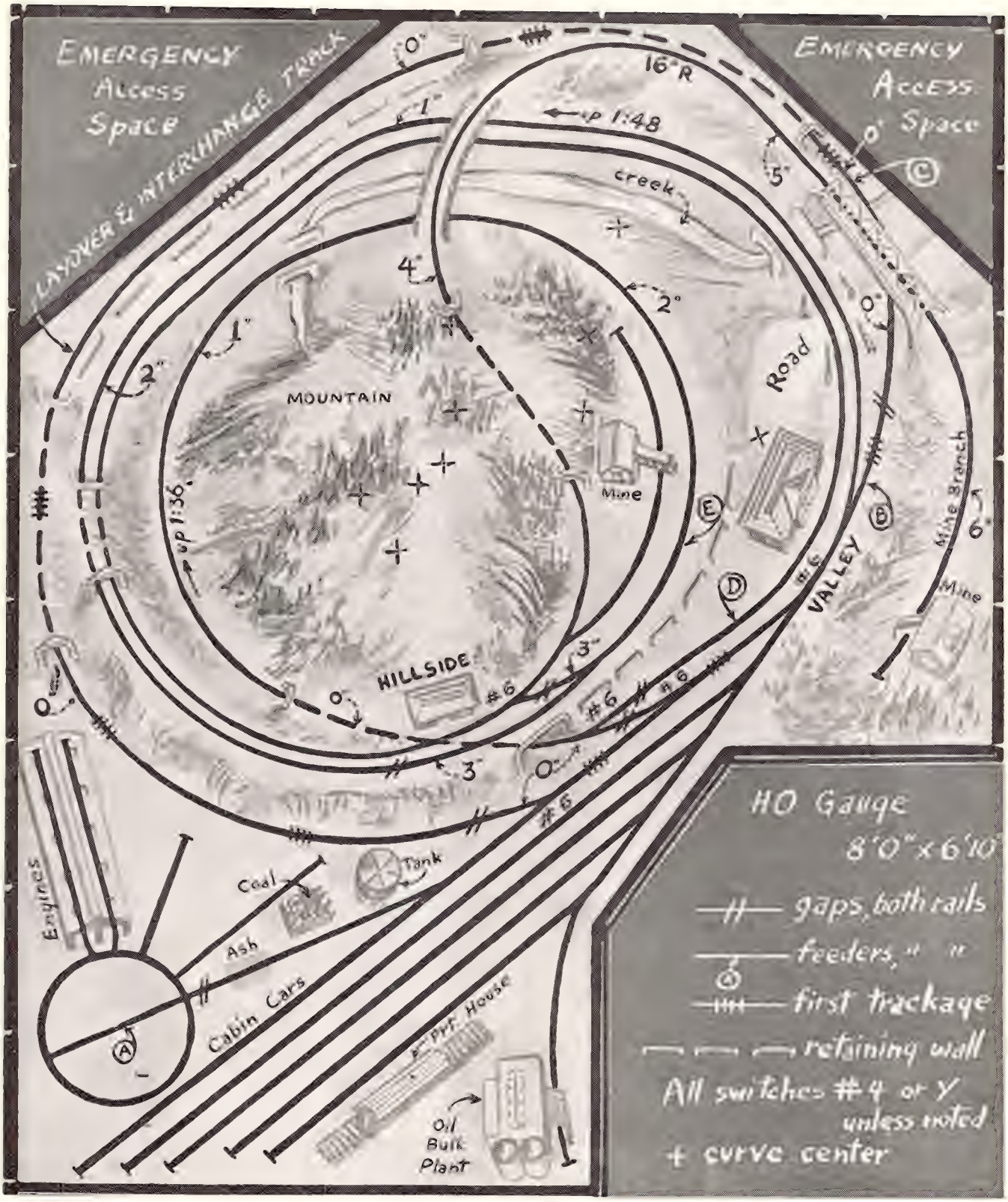
On any railroad involving various grades, it is helpful to have a *level* oval track on which to test rolling stock. This level oval can be built first before any of the grades need be built, and you will have a place to run and can take your time with completing the yards, grades, etc. When the main line is completed, you can, if you wish, run one train on the yard lead oval and one or more (as trackage allows) on the main line—with very little attention. To an armchair railroader, this might sound like Christmas-tree stuff, and in fact it is, but there *are* times when you just want to let them run as you will find out when you get out of that armchair!

This gives you some ideas on the advantages of an oval yard lead to which I might add that it can also be used as an industrial branch. Put all or most of your sidings to factories, etc. off the oval yard lead: this will require less switches and better operation on your main line.

Three HO gauge layouts are presented here which utilize the oval yard lead. The three are basically the same, adjusted for the various conditions met with in the railroad room. Although presented in HO, these same ideas can be readily adapted to other gauges.

Layout #1 for a space nine by twelve feet must be placed so that all sides are away from walls to permit access to certain switches and trackage along the back sides. Here is the way you could operate this railroad. A small engine such as a dockside or diesel switcher works the two branch lines running from Hillside. One branch runs around back of the central mountain to a mythical mine, while the other branch heads through a tunnel, across a trestle, to Topside where there are ore or timber loading facilities as well as a house-track. A through freight picks up loaded cars at Hillside, setting out empties, and takes them round and round the main line, eventually getting them to the main yard. Here, after classification, a switcher runs the loads around to the back of the yard lead oval where they are interchanged with the connecting railroad. Later the same cars, now empty, can be brought back to the yard, then put in a through freight, taken up to Hillside, then put in the branch train. Another branch to a mythical "mine"





follows the river to the right. Both this and the higher mine branch could be continued on and divided up into several tracks at the end to gain additional storage space.

Layout #2 is practically the same design, but with the top and left sides against walls. Thus all switches are accessible from the other open sides. The emergency access space in the center of table is used mostly for track repairs, although Coalville switches can be reached more easily from there. Operation would be the same. Both these layouts are single track with two passing sidings, but of course could be made double track if desired. Size is 10 by 14 ft. The legend shows in detail the various possible stages of construction, starting of course with the oval yard lead.

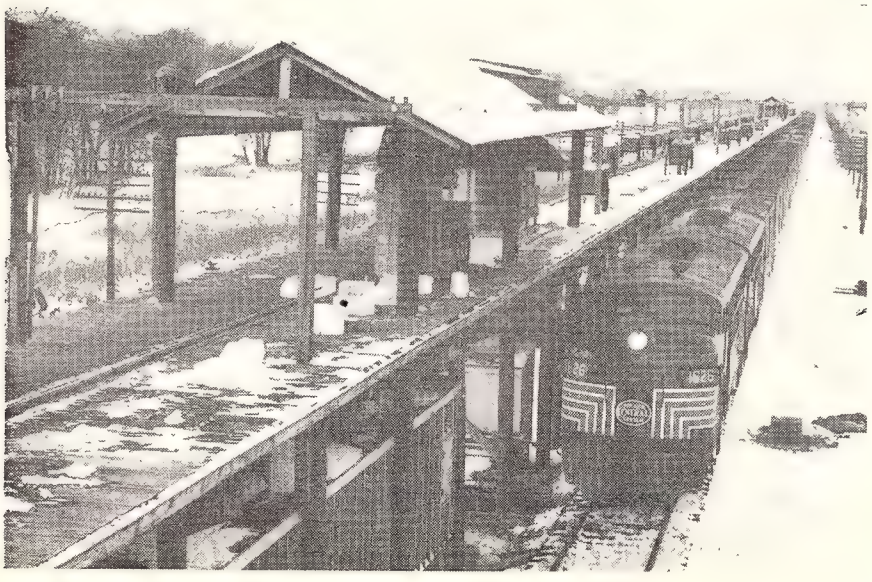
Layout #3 is still the same scheme, but compressed into an eight by six-ten area, a small room with an inward swinging door at lower right. Two tiny triangles in the top corners provide for emergency access to tracks. The lower left side is also open. We still have the branch line, very steep, with 16" radius curves, but the main line with 22" radius curves is reduced to one passing track or rather half single and half double track. There is still a yard and our new friend the oval yard lead.

If you have other than a minimum area for your pike, why not try adapting the oval yard lead to your purposes. The plans shown here are only one way it can be used. Let me hear, too, how you like it or don't like it.

. . . icing the reefers

1. The New York Central has installed, at Wayneport, N. Y., facilities for icing reefers in trains, forty cars at a time on each of two tracks. The icers are run in a block, usually at the head of a freight train, and swing in from the main tracks shown at far right and stop directly at the icing platform, where the correct type of ice (chunk or crushed) is waiting.

2. As train leaves the frontier bound for New York and other eastern cities, the consist is teletyped ahead to Wayneport with icers indicated and type of icing required so that everything may be ready. Waybills are carried on the engine so they may be handed to the icing plant forces for billing without delay. Last minute changes and corrections are broadcast over a loud speaker system, near a unit of which this workman is waiting.



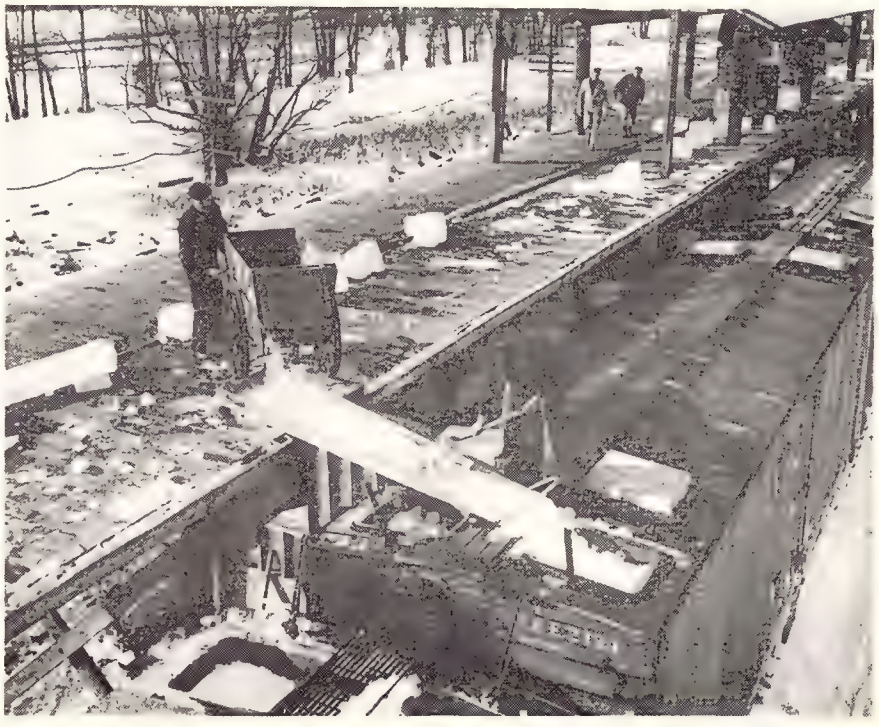
3. Here she comes! In off the main rolls the through freight with reefers bunched together. Elevator under shed hoists chunks and crushed ice from storage and preparation rooms under the platform. A model version of this icing plant might well be limited to eight or ten car lengths, with perhaps only one track. Two classy HO gauge icing platforms are available in kit form, with extra parts also sold to make longer platforms.

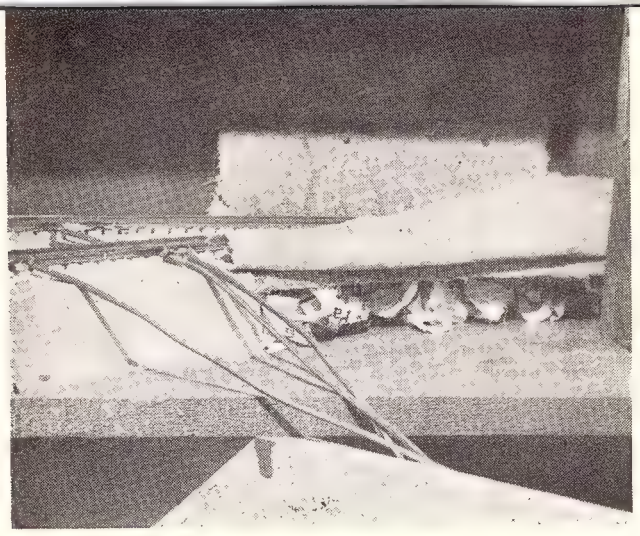
If you have refrigerator cars on your pike, you'll find an icing platform an excellent scenic device and also the cause of many car movements. The photos show interesting details that can be included on commercial structures or on models built in the home workshop. Note that it is just a crude platform built two feet higher than the reefers and as close to the track as regulations permit.

4. Finishing up the job (top right). Soon the train withs its group of reefers will head out on the main tracks at right to complete its run to Albany, Boston, or New York City. The record for icing a forty car train at Wayneport is 26 minutes, although the average time is somewhat longer. A much smaller version of icing platform for through trains can be effectively modelled on a long narrow section of model railroad table, otherwise difficult to scenic.

5. Workmen (at right) shove chunks of ice into the ice-hatches of waiting reefers. Such chunks are moved along the platform by lugs on the conveyor chain seen running down the center of the platform. Moving ice on a model icing platform would be an interesting effect possible to work out with an inexpensive Dyna-Mite motor and gear-box.

6. Crushed ice is a little messier. It is handled in two wheeled carts which dump their contents into chutes, thence into the bunkers. When train is due, loaded ice carts and several chutes are in evidence on top of the wide platform. In modelling a similar icing facility, have the little lead workmen in positions of repose, waiting for the train. Figures seemingly in motion are not realistic because they don't really move.





Whether our model railroad is a success or failure depends primarily on the trackwork together with its foundation. Here are many ideas to eliminate those unrealistic noises commonly heard on many layouts. These ideas were proven through actual use; they will guarantee reliable and smooth operation.

. . . better, quieter track

by Richard Houghton

SMOOTH operation of a model railroad depends first on good track. You'll be glad later if you spent extra time making sure of a solid foundation, if you laid trackbase of suitable material on an even grade and adequate curves, and if you took extra pains in laying ties and rails.

Too many modelers have dropped out of the hobby in disgust because they laid track too fast "to get something running", and then discovered their trains would not operate well.

To save space it may be necessary to lay track on a plywood sheet that can be stored away, but if this is the case the track should not be laid until a sound-deadening material is inserted between the plywood and the rails. Plywood is usually an annoying sounding board, magnifying the unreal tinny noises of cars and the gear whirring of locomotives. (Incidentally a thin plywood sheet should be stiffened with framing.)

Cork or Rubber Base

A trackbase of cork or rubber is its own insulation against unwanted sounds. However, if one of the types of wooden or other hard trackbase is used on a plywood foundation another insulation is recommended. It can be a strip of old carpet glued upside down on the underside of the trackbase. If the carpet is then tacked down along its edges, the trackbase will be fastened to the plywood and yet insulated from it. (See Figure 1.) Do not fasten wooden or other hard trackbase by putting nails or screws through it and the plywood, because metal carries sound and defeats the purpose of the insulation. Cork or soft rubber trackbase, however, could be fastened down with screws or nails.

Fiber Board to Lessen Sound

If cardboard tie strip is used, or if you lay your rails on individual wooden ties, you may want to make your own trackbase, and in this case a fiber type wallboard is recommended as a fairly good sound deadening material. It usually comes in sheets of 4 x 8 feet and can be purchased from most builders' supply houses under various brand names. We will call it "fibreboard," without any implied endorsement of any one products of that name. (Do not buy plasterboard, as that is useless for your purpose.)

The fibreboard is easily cut in curves or at odd angles with a keyhole saw. It can be cut larger than needed and trimmed down to shape with a sharp knife after the track is laid, perhaps drainage ditches formed at that time. (See Figure 3.) Sometimes it can be used in wide sheets to floor an entire yards system. And it could be used over plywood.

Another way to deaden plywood is to erect a considerable amount of plaster or gesso scenery on it (earth, streets, hills) along with buildings and shrubbery. The greater the mass, and the breaking up of the flat surface, the quieter the layout.

Open Framework Layout

Better than plywood for a foundation is the open framework type of layout support. An example of open framework is shown in Figure 4. Uprights A, B, C etc. support the track that is not at the main level. Long wooden strips X and Y are nailed on top the uprights as foundation for the fibreboard or other trackbase, Z. End joints of the strips should be staggered—that is, two strips should not end on the same upright except at the end of a track.

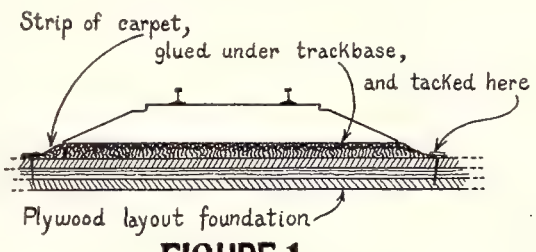


FIGURE 1.

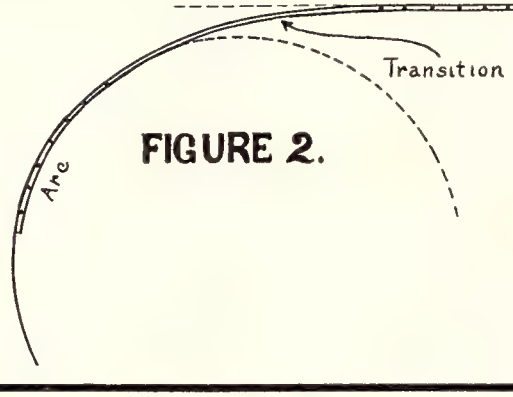


FIGURE 2.

On this type of framing other uprights of varying heights and contours, such as W, are fastened to support the modeled mountains.

Checking Clearances

It is a great temptation to lay track on curves that are too sharp, in order to crowd as much trackage as possible into a small space. For good operations it would be a smart idea to visit your hobby shop and look at the largest locomotive you dream of having in your gauge, then ask what radius curve it requires for trouble-free operation and use that radius as your minimum.

The layout builder should make sure his clearances are sufficient between double tracks, especially on curves. Standard measurement between centers of two tangent (straight) tracks is 14 scale feet, center to center, although most modelers in the small gauges prefer to widen this clearance (particularly in yards) so fingers can grasp a car more easily when another car is standing on an adjoining track. On curves there is no definite clearance standard in model railroading. Best way to arrive at the proper clearance is to lay a section of curved track, set your largest locomotives and cars on it and measure their overhang.

There are two kinds of curves—true arcs (portions of a circle) and easements (curves of changing radius which provide a path gradually bending from a tangent into the arc or vice versa.) For smooth operation an easement curve should be provided in your track between every tangent and arc. And every reverse or "S" curve should include a tangent of one car length, or more, and two easements, separating the reversed arcs.

Easement Curves

A simple way to lay out an easement is to fasten a long rod of some uniformly-bending material, such as a straight grained piece of wood or a length of rail, for a short distance along the tangent and for a short distance along the arc, as shown in Figure 2. The unfastened portion will form a natural easement. Slim and I cut cardboard patterns of our easements for quick laying out of our track—and also cardboard patterns of our true arcs. An old suitbox will usually provide enough cardboard. The patterns are used over and over.

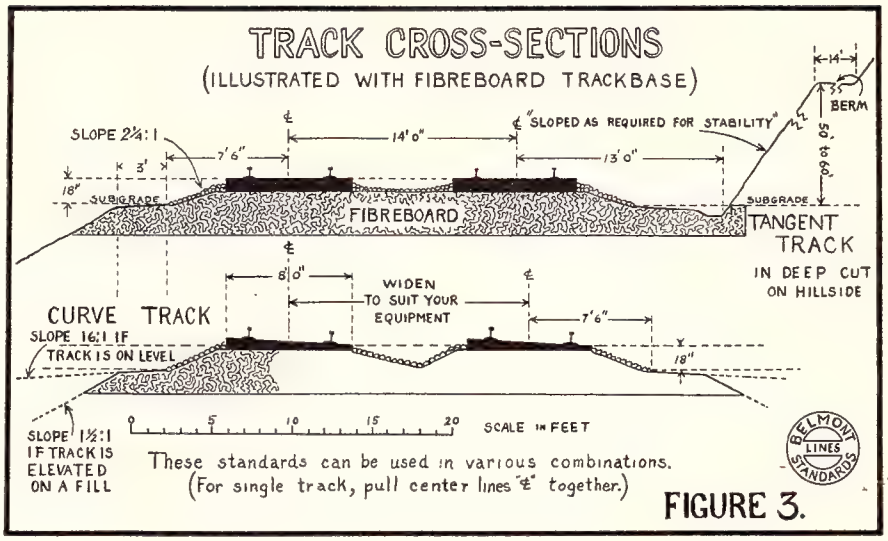


FIGURE 3.

It will be noted in Figure 2 that the tangent is not a true tangent to the arc. That is, the straight line if extended would miss the circle by a slight distance. Usually this miss need not be more than an inch, because an inch will take care of quite an easement.

The trackbase must be cut on the same tangents, arcs and easement curves as the track. Obviously the uprights in Figure 4 must also be properly located under the trackbase on tangents, arcs and easements. Sometimes you can use the long wooden sticks "Z" to help you locate the uprights on the line of the easement curves, as the sticks themselves will bend into natural easements.

Framework Design

It is important that the "joists" in your open framework be arranged in such a way that the supporting uprights will be as nearly as possible at a right angle crosswise of the track on curves, especially if the track is on an ascending or descending grade at that point. (This was a problem Slim and I avoided in our portable layout by having all our track on one level, but we have encountered it in some of the other layouts we have built.)

In our portable layout we needed one section of track as silent as possible. It included a main line and passing siding concealed under an enclosed shelf on which spectators leaned to look down at the layout. (See Figure 5). They were not supposed to know the trains were looping back under the shelf.

Running on Paper

To silence this track we laid it on a fibreboard base which was an extension of the visible part of the railroad but which floated on crumpled newspapers instead of a solid foundation. It was a system somewhat like that shown in Figure 1, if you can imagine the carpet in that figure deepened to about three inches! We glued the cloth to the sides of the fibreboard trackbase and tacked it as shown, pulling it down tight and stuffing papers in to hold the fibreboard firmly enough so it did not sag noticeably under the heaviest locomotives. The fibreboard extended onto the solid part of the layout, but we cut gaps in the rails so the sound would not be carried along them. Electrical connections across the gaps were provided by flexible loops of wire. Sound deadening material, such as several layers of carpet or fibreboard also should cover the inside of the wall and roof of a concealment such as this to keep the elbows and ears of spectators from picking up the vibrations.

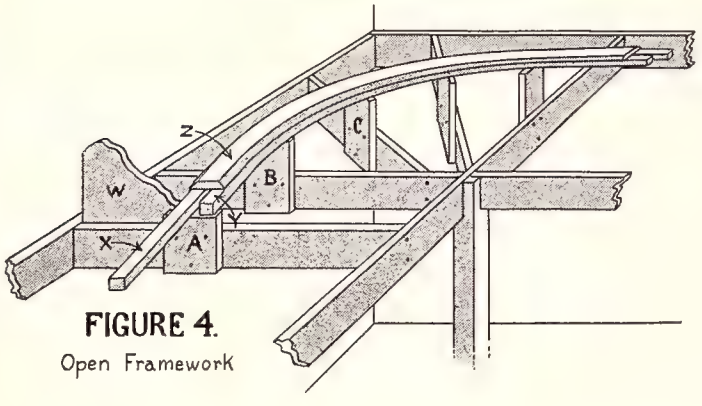
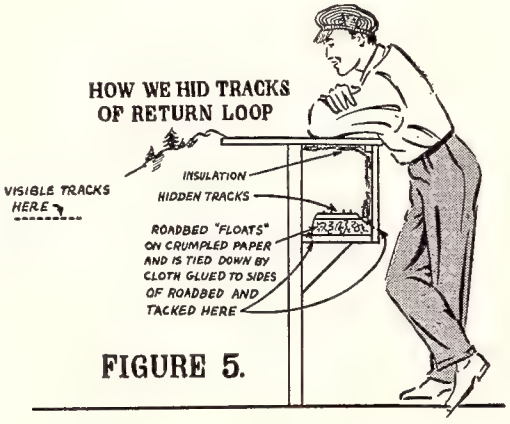


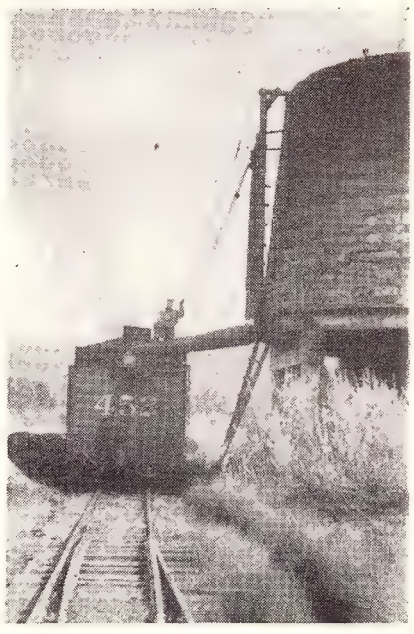
FIGURE 4.
Open Framework


HOW WE HID TRACKS OF RETURN LOOP
VISIBLE TRACKS HERE
INSULATION
HIDDEN TRACKS
ROADBED "FLOATS" ON CRUMPLED PAPER AND IS TIED DOWN BY CLOTH GLUED TO SIDES OF ROADBED AND TACKED HERE
FIGURE 5.

...leaves from a railfan's notebook

Keeping apace of the famed Colorado Narrow gauge railroads via auto. These old installations present many ideas to the alert modeler such as the facilities at Silverton, Ouray and Ridgeway, all on the Rio Grande Southern R.R.

By L. A. Bartholomew



RGS #452, getting a long drink of snow water at Ridgeway.

AFTER leaving Durango, Colorado, the closest place of interest to any railroad enthusiast is Silverton which boasts a branch of a once prosperous narrow gauge line. The motor highway between Durango and Silverton is a long succession of curves, always gaining elevation crossing the railroad at grade just before reaching Rockwood, a vacation resort and dude ranch. Here the railroad disappears from view, taking an easier grade than the road. Soon the road was high in the mountains. Noon found us directly opposite the intake for a large hydro electric plant; it had a large wooden flume which delivered water to the head of the steel penstock. The vertical drop to the plant is several hundred feet and the railroad runs on this low level, just at the river's edge. The water in the flume is taken from the same river but at a still higher elevation than from where we observed the scene.

After lunch, we pushed on, reaching an altitude of over 10,000 feet before descending into the little mining town of Silverton. Several small mines were passed, most of which were not operating. At one place on the road, Silverton with its railroad yards could be seen spread out like a model railroad layout. Very high mountain peaks ring Silverton into a high mountain valley, through which the railroad enters in the only break, the canyon of the Las Animas River.

The minerals in the rocks have a predominately red color, although there are yellows, greens, and grays. I thought of the many model railroad layouts I had seen, where the builder was reluctant to use plenty of color. Some model mountains are either too brown or nearly all green. Be lavish with your colors and you may in some measure achieve what nature did for Silverton. Patches of last winter's snow also blended into the picture to form one tremendous panorama.

Soon we were driving up the main street of the quaint little town, with its old-fashioned buildings that looked like they might dateback a hundred years or more. Silverton doubled for "Epitaph" and "Tomahawk" in the movie "Ticket to Tomahawk", filmed there in 1949. It was here that I saw the "Emma Sweeney" was in reality, twins. The Emma Sweeney was Rio Grande Southern's locomotive "20 dolled up to look like a belle of the eighties, with lots of shiny brass work, boiler and tender painted green, a huge wooden cowcatcher, oil headlight, and believe it or not a pair of deer antlers above the headlight.

In the movie the locomotive is towed by a hundred or so horses over a rough dirt road, and finally a mountain trail. You can't treat a real locomotive that way, too much weight. They built a wooden replica to full size, so exact in appearance that one couldn't tell them apart. The dummy was light enough for the large number of horses to pull without even getting the traces tight. In 1949, when I rode into Silverton on the mixed train, my movie camera caught both of the Emma Sweeneys together, as well as the movie company of cowboys, Indians, ladies in gay nineties in long dresses and poke bonnets, and of course all of the odds and ends of equipment that a movie company needs in filming a big picture.

The mountains surrounding Silverton are pierced with numerous mine tunnels which from a distance reminds one of

Passenger and Freight station at Silverton, used in movie, "Ticket to Tomahawk."

Looking across turntable pit, from RGS roundhouse at Ridgeway, Colorado.

Looking back up canyon which motor highway descends; mine buildings can be seen.

Ouray, nestled high in the mountains, a true town of yesteryear.

gopher holes. Below each was a huge pile of gray or red discarded rock. This reminds me of a story of how the town got named. It seems that before silver was discovered there, a prospector came to town, and asked casually of a bystander if there was any silver in the hills. The reply was "Sure, silver by the ton", and that is how the town got its name. Now I won't vouch for the truth of the story, as it was told to me by a restaurant keeper there.

From Silverton we headed for Red Mountain Pass, which is well over 12,000 feet high, enroute to Ouray. All along the road we saw mine workings, some abandoned, some operating. The Silverton Northern Railroad once operated up through the pass. It ascended by means of switchbacks. One peculiar thing about the line was that at one place their mainline actually crossed their turntable.

The downgrade from Red Mountain towards Ouray, pronounced U-ray, is the most spectacular half of the million dollar highway. I once received a letter from the station agent at Durango in answer to one of mine concerning the country around Durango, and he said "By all means drive over the Million Dollar Highway, and after you have, you might say 'why didn't they spend another million and make it wider'." I could see now what he meant. There are miles of road that is one and a half cars wide that has been blasted out of the solid red rock cliffs. There are no guard rails, or embankment on the canyon side. A slip on slippery road could put one over a thousand foot drop to huge boulders below. We were on the cliff side, which made me breathe easier. We reached Ouray, about 5 o'clock in the afternoon.

The Denver and Rio Grande Western has a narrow gauge line into Ouray. There is a passing siding, the foundations of a station that has long since passed into oblivion. The line simply ends there. A few Gondolas, some loaded with coal, some empty, sat forlornly on the weed grown tracks.

The Railroad and the town, which is very small, have the air of reaching the end of hope. The town sits within a square of high cliffs, that make it look insignificant. Its few buildings are for the most part very old. The place has a certain charm to the visitor from a scenic sense, but one is struck by the futility of it all. What do people live on in such a place? Near the town is one of the wonders of the west, Box Canyon, where a waterfall some 300 feet high falls into a canyon so narrow and hemmed in by cliffs as to make one think they were in a cave. A wooden catwalk leads around the cliffs so one may enter. A narrow stairway leads down into the "cave".

Twelve miles more and we are at the roundhouse of the Rio Grande Southern narrow gauge railroad at Ridgeway. 162 miles away over its slim gauged rails is Durango, Colorado which will be described next month.

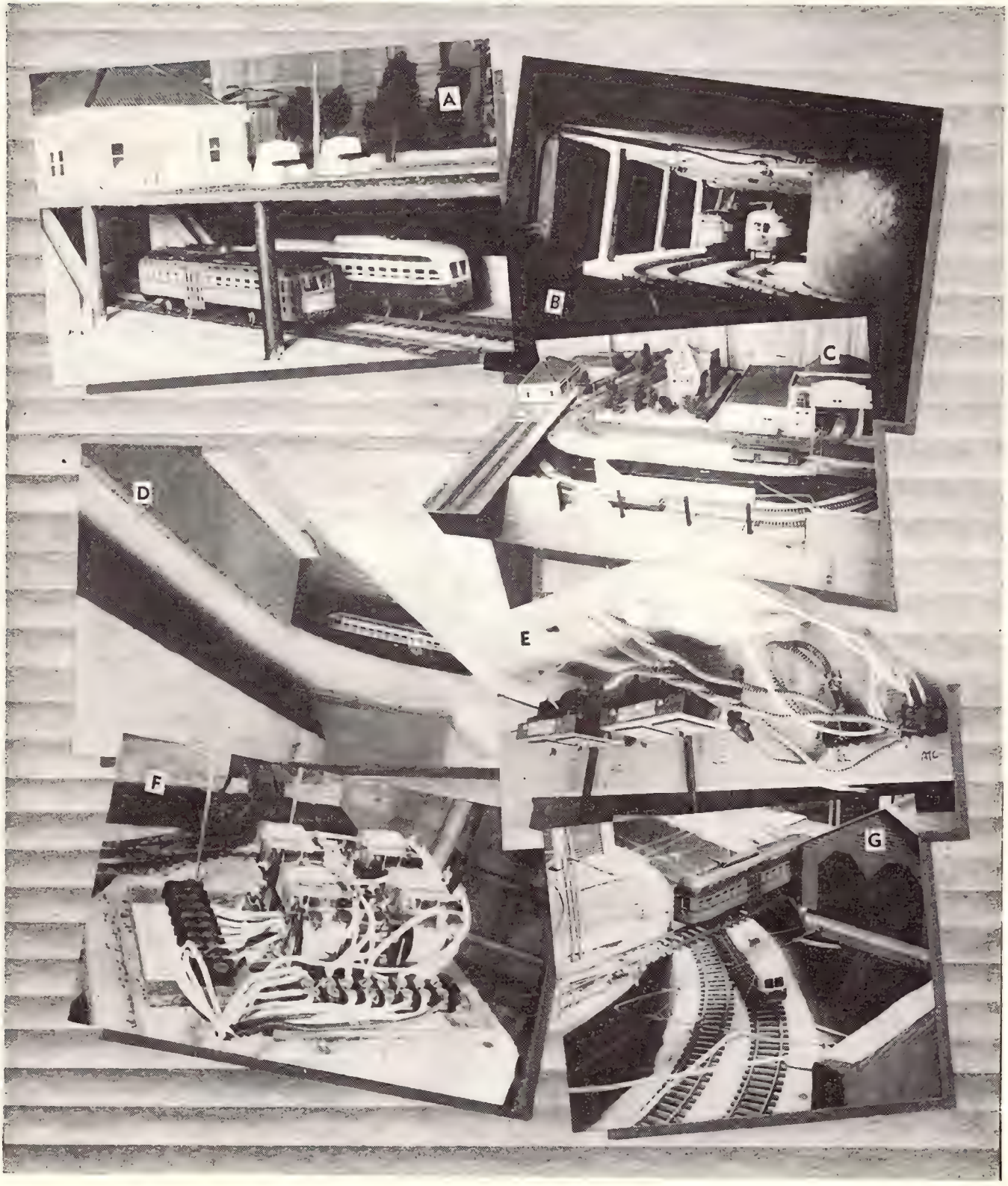
Bear Creek Falls makes 300 foot plunge into rugged canyon.

All along the road we saw mine workings. This is Camp Red Bird Mine.

Silverton lies in a narrow valley at an altitude of 9300 feet.

. . . accessibility

To clean track, rerail a car and for other maintenance duties, it is necessary to provide access to all possible trouble areas. Here are ideas which can be used on your own pike; descriptions are opposite.



A photo story which clearly illustrates methods of gaining access to various parts of the layout for repair and maintenance work.

A. This trolley subway is on the HO gauge Penna. Scale Models demonstration layout which was described in detail in the RMC for Sept. 1951. The second photo, **B,** gives an even more fascinating view through the hole left for the recessed control panel. Only extensive use of lights could have improved the thrill of having the little trolleys whiz by your eye.

C. But suppose a car or a trolley pole goes off in the subway? Or suppose track or overhead wire needs servicing? The designer allowed for access in various ways. Here the roof of the front half of subway is shown lifted off and set to one side. ⅛" Masonite was used for this section and of course it was protected from serious strains.

D. The left side of the little subway can be reached through an opening or by another removable Masonite roof which is kept screwed down most of the time. The curve at left rear, just before the subway emerges into the open, is reached for re-railing from underneath. This unusual shot is taken looking up from under the layout and shows a PCC trolley in the tunnel. Otherwise inaccessible tunnels on regular model railroads often must be reached from below.

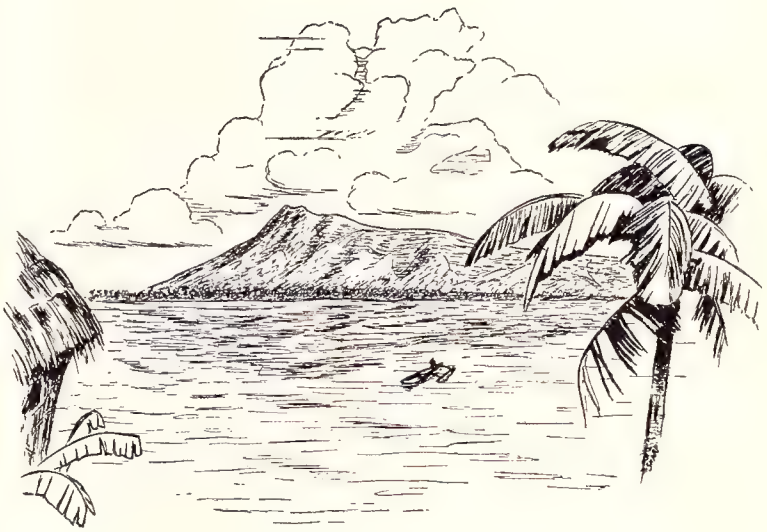
E. Two Minipacks to operate trolleys and relays were mounted on one of the cross-members and leads taken off to terminal strips from which connections were made to the relay and control panels. Pencil marks on the wood identified the various units. Positive and negative signs were there but do not show up in the picture.

F. The four NMRA type relays needed for the automatic trolley control system were mounted on a block and concealed under a factory at the front corner, just over the recessed control panel and easy to reach. All wires were brought out to terminal strips and labelled. Unused portion of left strip is for possible addition of signals at a later date.

G. A removable piece of street allowed access to wire and track at the right exit from the subway. The ⅛" Masonite street slid out from under the Atlas track used on the system which was strong enough for this short span to support a trolley without strain. The factory covers the relay panel, while the recessed control panel is directly under it.

THE pictures from an Esquire calendar make nifty billboards if the calendar and other written matter is covered with portions of other ads cut from magazines. A coat of clear varnish and of course a frame completes each billboard. My passengers sure get an eyeful, even if the scenery along the right of way isn't entirely completed. This is in O gauge, but the idea should be usable in other gauges too.—*K. Williams*

?

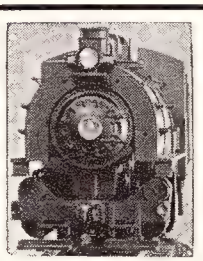


MANTUA

First in HO

General Motors Diesel, Model FT
O gauge A & B unit—complete kits or ready-to-run. WENTZCO POWER TRUCKS have every wheel sprung and powered from one K & D No. 3 or Pittman DC-93 motor.
WENTZCO PRECISION MODELS
979 Woodland Ave., San Leandro, Calif.
6c stamp for folder and parts

CUSTOM BUILT HO CARS
Box cars and reefers done to your specifications. Lettering and heralds supplied for model pikes. Write for quotations.
MID-WINTER SPECIAL
RMC Pickle Car less trucks only—$2.00
SCHULTZ & LAWRENCE
540 So. 17th St. Newark 3, N. J.



REX "S" GAUGE DOCKSIDE KIT

The finest, most detailed locomotive ever offered in any gauge. Will negotiate the sharpest radius curves with ease yet pull a man-sized string of freight. Each kit complete, nothing else to buy.

- Pittman DC71A motor
- Completely Machined parts
- Inside power pick-up
- 30 finely detailed castings

Here's what modelers, who have purchased the kit, have to say!
(Unsolicited quotes from letters in our files.)

"Wealth of Detail"
"Runs like a Watch"
"Pulls 16 cars with ease"
"Dependable operation"
"Easy to Assemble"
"Precise fit of all parts"
"Fine Workmanship"
"Appreciate the Extra parts"

For reliable, true-to-scale motive power in S gauge, get your Dockside today.
At your Dealers—only $36.00.
Available Immediately!

S GAUGE REX ENGINEERING & MFG. CO. P. O. BOX 231 BIRMINGHAM, MICHIGAN S GAUGE

WATCH US
for new products and good news in HO
Pennsylvania Scale Models
14 S. Centre St. Pottsville 4, Pa.

JUST OUT
NEW O GAUGE 1952 CATALOG
Attractive 40-page brand new catalog. Yours for only 25c. Includes continuous mailings.
O—S—HO—TT
SHIPS—PLANES—STAMPS—OLD COINS
ALL-NATION HOBBY SHOP
180 N. LaSalle St. Chicago 1, Ill.

"U BUILD IT" PACKETS

Back issues of Model Craftsman at special reduced prices. All magazines are complete, in good condition and will be shipped same day as order is received. Shipments are postpaid.

Eleven Issues 1943—$2.50

JANUARY
J-3A Hudson Mainliner
Retaining Walls
Electrical Ideas

FEBRUARY
Erie 2-8-4
Model Tunnels
Motor Flat Cars

MARCH
HO Trolley Base
Trestles
70 Ton Covered Hopper

APRIL
80 Ton Diesel Elec. Switcher
OO Gauge Observation Car
Trestle Work Overpasses

MAY
Coal Trestles
Slaughter House
Interurban Observation Car

JUNE
Forty Foot Stock Car
Interurban Parlor Cars
Two Conversions

JULY
Layout Contest Winner
New York Central Mogul
Scale Test Car

AUGUST
Erie 4-6-2
Seaboard Pulp Car
Tinplate Switches

SEPTEMBER
UP all-steel Caboose
Shay Geared Loco
Realistic Fire Scene

NOVEMBER
NYC Fire Fighter Car
Old Time Box Car
Interurban Junction Station

DECEMBER
HO Derrick Car
NYC 4-8-2 (Mohawk)
Third Dimensional Background

Ten Issues 1944—$2.50

JANUARY
Track & Scene Building
Lift Bridge
HO Derrick Car

FEBRUARY
Lighting R.R. Layouts
HO Baggage Car
Testing Loco Motors

MARCH
A Miniature Sawmill
Pere Marquette 0-8-0 (Plans HO)
HO Hopper Car

APRIL
Cigar-Box Wood Caboose
Narrow Gauge Loco
Model Bridges

MAY
Narrow Gauge Cars and Tracks
Track and Switches
Troop Sleeper

JUNE
Low Wheeled 4-6-2 Pacific
Old Time Freight Cars
Model Hand Car

AUGUST
Old Royal Blue Cars and Loco
Battery Charging Hints
Semi-Diesel Railcar

SEPTEMBER
"999" in HO Gauge
Motorized Wrecking Crane
Human Interest on your layout

OCTOBER
Switch Motors from Doorbells
Shooting Trouble on Motor Trucks
Layout Contest Winner

NOVEMBER
Six Passenger Cars
A. C. Power Supply
Coal Breaker

Eleven Issues 1946—$2.00

FEBRUARY
How to Build Tunnels
Trolley Freight Service
C & NW Pacific (proto plans)

MARCH
Southern Pacific 4-4-0 (HO)
Bridges
Detail Design Data

APRIL
Wiring Circuit
HO Coal Tipple
Double Cab Work Car

MAY
Lighting Trains & Bldgs.
Terminal Throat
Pacific Electric Car

JUNE
HO Wood Box Car
Train Control Rheostat
B & O Mallets

JULY
V & T Passenger Station
HO Wood Gondola
Mother Hubbard 4-4-2

AUGUST
Pennsy E-6 Atlantic
3-Way Switch
Scenery Foundation

SEPTEMBER
Suburban Double Ender (2-6-2)
Express Reefer (HO)
Simple Interlocking Plant

OCTOBER
Loco Traveling Crane
Short Baggage Car (HO)
Working Waterfall

NOVEMBER
Railroad Steam Shovel
Worm Drives (O)
Pennsy 0-6-0 Switcher

DECEMBER
Two Rail Signals
Four Wheel Crummy
Complete Farm

The Complete year 1947—$2.50

JANUARY
Blue Comet Cars
Spring Switches
Moving Traffic

FEBRUARY
Clearance Car
Ten Wheeler Loco
New York Central Coach

MARCH
Boston & Maine Mogul
Roundhouse in HO
Garrett Locomotive

APRIL
Narrow Gauge Coaches
Plan Your Terminal
Covered Bridge

MAY
DL & W Consolidation
Narrow Gauge Tank Loco
Combination Station

JUNE
Baker Valve Gear
B & O Pacific 4-6-2
Big City Car

JULY
Truss Bridge
Cable Car
Pennsy Mikado 2-8-2

AUGUST
Boston & Maine Atlantic
Signal Control
Model Bungalows

SEPTEMBER
Finishing Your Rolling Stock
Interurban Sand Car
Micro Trains (HOO)

OCTOBER
Detailed Caboose
Turbo Locomotive
Atlantic Coast Line 4-8-4

NOVEMBER
Side Tank Locomotive
A Model Traction Layout
Modelmakers Power Tools

DECEMBER
Realistic Arch Bridge
Simplified Interlocking
Beginners Hopper Car

The Complete year 1948—$2.50

JANUARY
O Gauge Caboose
False Fronts
Gallows Frame Turntable

FEBRUARY
O Gauge Inspection Engine
Three Dimensional Planning
Reading 4-4-2

MARCH
Trolley Street Sprinkler
New Haven Electric loco
Search Light Car

APRIL
General Electric 0-4-4-0
Fuel Dealers Yard
Building a Bunk Car

MAY
Diesel Passenger Loco
Old Time Passenger trolley
The Little B & O

JUNE
Current Collectors
Getting Started
Arched Roof Coach

JULY
Automatic Wyes
Streamlined Cars
Pile Driver Car

AUGUST
SP 0-6-0 Switcher
Trolley Pole Bases
CP 3 Door Baggage Car

SEPTEMBER
Dining Lounge Observation
Streamlined Baggage & Mail
Train of Tomorrow

OCTOBER
Express Cars
Enclosed Motor Drive
Old Time Engine House

NOVEMBER
Turntable for HO
Electric Trolley Loco
TT Water Tank

DECEMBER
Finishing Rolling Stock
Milk Cars
Phantom Car

The Complete Year 1949—$4.00

JANUARY
Electric Trolley Loco
Pullman Observation Car
Live Steam Loco (½")

FEBRUARY
American Locomotive in HO
Getting Started
Control Circuits

MARCH
Interurban Official Car
Refrigerator Car
N & W Class J 4-8-4

APRIL
Passenger Diesel in HO
Canadian National 4-8-4
HO Car Seats

MAY
Here Comes the Circus
Turntable-Fully Automatic
Gas Electric Car in HO

JUNE
A Railroad that Folds up
Two power wiring circuits
Scenery—Made Easy

JULY
Pennsylvania 4-6-0
Remote Control for Pantographs
B&O Thirty Foot Arch

AUGUST
Tree Trix
Southern Pacific Lines
California House in Plastic

SEPTEMBER
Building from Photographs
CNJ 0-6-0 Switcher
Disappearing Pike

OCTOBER
Model Trolley Control
Baldwin 0-6-6-0
Model Glass

NOVEMBER
Electronic Control
Some Old Time Varnish
There's Always a Prototype

DECEMBER
Camouflage Operating Space
Mother Hubbard 4-4-0
So You Want Old-Timers

The listings above are only a partial index to the many interesting features and departments in each issue. Every magazine is packed with constructive material covering a variety of projects in all gauges.

Railroad Model Craftsman — Dept. 352 — Ramsey, New Jersey

Gentlemen:

Please ship me the following numbers of Model Craftsman immediately: 1943 (11 issues) ☐; 1944 ☐; 1946 (11 issues) ☐; 1947 ☐; 1948 ☐; 1949 ☐.

I enclose my check _____ money order _____ in payment.

Name _____

Street _____

City _____ Zone _____ State _____

(Note: If you do not wish to mutilate your magazine, enclose remittance with letter. Please include name and address.)

Mans' Best Friends

THE railroad modeler's best friend is a pair of long nose pliers—not too long, and not too narrow, so they have considerable bite in their jaws. A useful kink is to file or grind (with a motor tool) a groove across the inside of each jaw about ⅛" up from the end. This is to enable you to grab spikes without the whole pressure being on the edges of the spike head. Thus you can push spikes in grasped with the pliers, and push them all the way home with the ends of the closed pliers.

His next best friend is a screw-driver, or rather an assortment. If only one screwdriver is to be picked, make it one with a blade about 3/16" wide. The second one should be a jewelers' screwdriver with blade a little less than ⅛" wide. Another jewelers' screwdriver with blade less than 1/16" wide is handy for optical screws. Blades may be ground thinner if required for small screws, however be careful in grinding that you do not make the blade change color in which case the temper is changed. On occasion it may be necessary to grind a blade narrower to get into some recess. Of course a large screwdriver with perhaps a ¼" wide blade is useful in assembling benchwork.

Maybe a file comes next, but I'll nominate a soldering iron with flux and solder. But then comes a small flat file, a larger rougher file, and a light hammer. A hand-drill might be next in importance with drill bits 1/32", 1/16", etc. up to ¼". Special numbered drills sometimes required can be bought as needed, along with a pin-vise to hold them. For a regular vise, I'd recommend a drill-press vise that can be moved around. A pair of tweezers comes in handy, as well as various types of pliers—cutters, round-nose, and "gas" pliers.

GO ALL THE WAY—JOIN NMRA

▷ Model railroading is one of the finest hobbies in which anyone can interest himself. It is one of the few hobbies that both the younger and older man can enjoy and share with equal interest, enthusiasm and friendship. Furthermore, we are very fortunate in having an organization, the NMRA, whose whole interest is in the promotion of model railroading for our enjoyment.

Too many modelers do not know that the reason they can operate several different makes of locos and cars on their layouts is because NMRA was formed in 1935. Just ask some of the "old-timers" what model railroad parts were like *before* NMRA. I'm not exactly an old timer, but I've seen some of this off-standard, out-of-gauge equipment. It was terrible!

The only reason why our hobby is growing day by day is because you and I are getting pleasure and satisfaction out of it. BUT you cannot always be taking things *out*. YOU must put something in. That's just good business.

I appeal to you modelers who are not yet members of NMRA to send in your two dollars NOW. It's cheap insurance against pre-NMRA's *non*-standards! Besides, you're missing a lot of fun.

For full information, write TODAY to NMRA, Box 1238, Station C, Canton 8, Ohio. Better yet—talk to your hobby dealer; he has all the dope on getting on the inside of model railroading, through NMRA. *Bob Robinson*

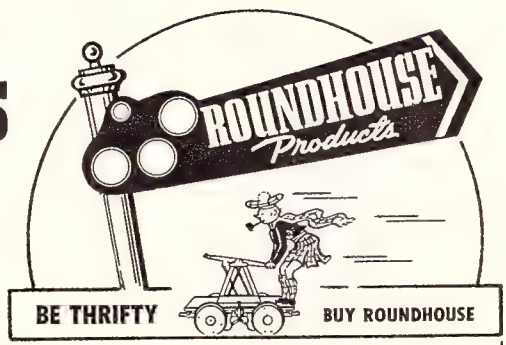
BIG expanses of plaster scenery drink up expensive paint very fast. I save on paint by buying small cans at the five and ten, then thinning them out with two to four parts of turpentine in a larger can. I use greens and browns for my basic colors but mottle them with bits of red, blue, yellow, in fact any color, but not in large areas. This blends in with the green and does away with that flat look.—*C. R. Norwood*

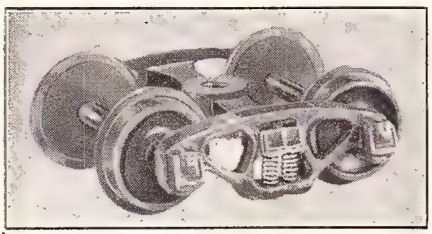
STEEL upholstery webbing sold for repair purposes in many places including the mail order houses like Sears is handy around the model railroad. I use it for diagonal braces on my tablework. The diagonals let me use lighter wood for the other parts and the steel strip is cheaper than wood.—*J. Motron*

HO TRUCKS

The World's Finest!

A PAIR OR
A CARLOAD





BLACK FINISH, FLEXIBLE ACTION, WITH REAL COIL SPRINGS

Bettendorf 4 whl. Freight Truck in Easy to Assemble Kit Form ..... pr. 75c
Same Truck Completely Assembled ..... pr. 90c

BLACK FINISH, RIGID TYPE

Andrews 4 wheel Freight .....pr. .90
Dalman 4 wheel Freight .....pr. .90
Bettendorf 4 wheel Freight .....pr. .90
Arch-Bar 4 wheel Freight .....pr. .90
Std. Pullman 4 whl. Passenger....pr. 1.10
Std. Pullman 6 whl. Passenger....pr. 1.35
Penn. Roll. Bear. 4 whl. Pass. pr. 1.10
Challenger 4 whl. Passenger ....pr. 1.10

NATURAL FINISH, RIGID TYPE

Penn. Roll. Bear. 4 whl. Pass. ....pr. 1.10
Challenger 4 whl. Pass. .....pr. 1.10
Commonwealth 4 whl. Pass. ....pr. 1.10

Sold by All Model Dealers

ROUNDHOUSE Simplified Car Kits and ROUNDHOUSE Model Railroad Paint

The Ultimate in Model Railroad Equipment

Made by Model Die Casting Co., 10201 Anza Ave., Los Angeles 45, Calif.

Stop Guessing!

For consistent uniformity of colors that assure faithful matching USE

ROUNDHOUSE

MODEL RAILROAD PAINT

Every batch is processed, mixed and tested to rigid specifications. WE MAKE IT in our own plant. Ask for FREE Model Painting Guide!

48cc
JAR
40c

H. P. TT

POWER UNITS FOR ALL PURPOSES

0-6-0	0-8-0	2-6-0
2-6-2	2-8-0	2-8-2
2-8-4	2-10-2	2-10-4
4-4-2	4-6-2	4-6-4
4-8-2	4-8-4	4-6-6-4
4-8-8-4	2-8-8-4	2-8-8-2

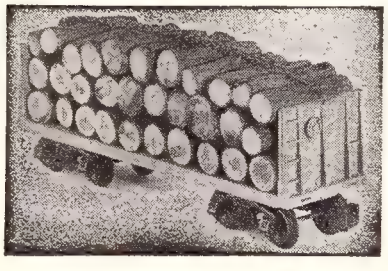
Diesel A Diesel B
MU Coach MU Combination

From $10.95 to $100.00

Write for Literature—10c

H. P. PRODUCTS CO.
HARTFORD CITY, INDIANA

TINPLATE PULPWOOD CAR WITH LOGS



Complete, ready to roll; sturdy all metal construction. Price $4.75
Watch our Ad for more new tinplate cars soon.

THOMAS INDUSTRIES
Shawnee, Oklahoma

MARKLIN
We now have the Complete HO MARKLIN line to serve West Coast Fans.
For a startling new world of model railroading send for Sixty-page illustrated catlog. 35c

CARL'S
MODEL SUPPLY HOUSE
8108 S. Vermont Ave., Los Angeles 44, Cal.

TRAINS NEED LIGHTS WHEN RUNNING NIGHTS

Light your diesels, passenger cars, cabooses, etc., with SCALITE EQUALUME lighting. Spreads light evenly thru every window. Tail end cars have working markers and bulls eye. Locos have changeable running lights. Kits available in HO and O gauge. Easy to install. Send stamp for list.

SCALITE, Dept C7
948 N. Keystone, Chicago 51

What's Needed

by Bill Schopp

(Here are some more ideas I have that seem to me would be worth manufacturing by someone. I hope you will send me, care of Railroad Model Craftsman, your suggestions along the line of what's needed. Maybe something could be improved, maybe something that just isn't to be had at present, but do try to pick something that would in your opinion sell at least half-way well. Any ideas submitted will be strictly on a "for-free" basis, with any manufacturer entitled to use same without remuneration to you, to me, or to the magazine.

Roundhouse for Tinplate

29. A tinplate roundhouse that would sit close up to the 20" turntable proposed a few months ago or to a Parnell 20" turntable. Would be nice if it was of lithographed metal, but I think a lot of fellows would settle for fibre-board or wood. Could be a kit, shipped knocked down to save space. The same house might be usable for either S or O gauge, and might include such details as *smoking* smoke-jacks.

Rotary Snow Plow

30. A rotary snow plow with revolving rotor for HO and O gauge tinplate. Power to turn rotor could come from the rails, and maybe there could be a headlight, too. The HO model would be in kit form. The O gauge tinplate car might have a strong enough motor to actually cut a path through artificial snow heaped over the rails. This is one "action car" that Lionel missed . . . . boy, what a mess it would make!

Old Time Structures

31. Some old time houses to go with old-time railroads, probably in HO gauge. For the Penna. Scale Models trolley layout (Sept. 1951 RMC) I built one of these, shown dimly in one of the photos. It attracted a lot of attention at shows, and a lot of inquiries about where it could be had. Well, that darned thing took me a whole week to build from scratch, but I think the process could be simplified. I have quite a few such plans with much detail which I will make available to any interested manufacturer for copying and use. The old houses (1888) are not simply four walls and a roof affairs, and would probably have to sell for several dollars even in kit form.

Coaling Tower

32. I think there is room too for an inexpensive coaling tower suitable for a small railroad. One possibility is the Lake Erie, Franklin, & Clarion tower I wrote up in May, 1938, Model Craftsman. Or a locomotive hoist coaling tower where the engine had to lift, by means of a cable, the coal high enough to dump it into the tender. Then there are various coaling arrangements where coal is loaded into a huge bucket and swung out on a crane to be dumped into the tender. How about something like that?

Ash Handler

33. The average model railroad ash-pit is nothing but some dirty sandpaper placed over a supposed hole between the rails. But how about an ash-handler such as I wrote up in the Model Craftsman for Nov. 1946? This has a little car under the rails (supposedly) and hoists it upward and outward and dumps its contents in a waiting ash car.

Truck-Coupler Combinations

34. A great boon to HO railroading in very small spaces would be trucks with automatic couplers attached. Thus the couplers would swing with the trucks, a great help in coupling on sharp curves as well as rounding these same curves. With some makes of couplers the wheels bang the draft gear housing and prevent sharp turning. Varney had something like this long, long ago with the now extinct Varney automatic couplers. Whatever type of coupler were used, I think the manufacturer could provide replacement bolsters for Athearn, Silver Streak, Mantua, and other popular makes of trucks, and so save on metal. In ordinary times, complete truck-coupler assemblies could be marketted.

Scale Brake Shoes

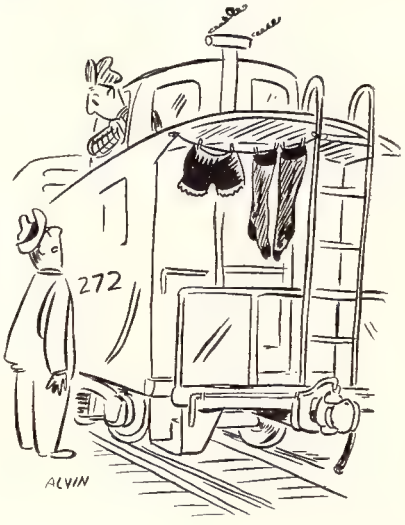
35. Driver brake-shoes for popular locomotives. Maybe these could be supplied loose, with material for hangers, etc. and instructions for attaching authentically to all popular locomotives in the gauge, probably HO. This could be —in fact should be—made of plastic or maybe even wood and cardboard.

Conversion Kits

36. New superstructures for tin-plate engines. What I have in mind is something like a Lionel 2-4-2. Take off the body and replace it with the "new" body converting it into, let us say, a box cab electric type. Or do a little more revision, put on anothr body, and have an old time 4-4-0 in tin-plate. This could be an almost-kit, and probably plastic and cardboard could be used if necessary. An old timer for tinplate should go over nicely.

Skyway Railroad

37. An aerial cableway outfit for tin-plate roads. What tin-plate railroad doesn't have a mountain with a beacon on top? Well, now how about an aerial cableway to the mountain top. Top and bottom head-houses could be about the



same in design, one containing a motor (or hand-crank or wind-up motor for that matter). The cable car would be another part, and a good supply of string would enable one to run the tramway for various distances. My guess is that if a hand-crank were used to keep costs down, this could be sold at a popular price and would have wide sales around Christmas.

FROM THE READERS

V. C. of Edmonton, Alberta, says we need a coupler height gauge. Well, there is one sold by Mantua which serves for their couplers. To our knowledge, nothing for the other makes and gauges. Coupler manufacturers might at least be sure to give suggested standards of rail-head to bottom of knuckle measurement, then we could use a piece of strip-wood for a gauge.

W. R., Jr., Denver, Colo. would like to see a gas-electric car in O gauge sold in kit form; maybe a McKeen motor car. (Amen)

R. B., Brooklyn, N. Y. would like to see kits for HO gauge camelbacks such as the CRRNJ 2-8-0, 4-6-0, and 0-8-0, as well as the Penna. S-2 steam turbine job. Yes, we'd buy 'em in the east, but out in the wide open spaces west of the Susquehanna River you'd sell about 2. A possibility, though, is camelback superstructures or conversion kits for existing kit built engines. I think this would be particularly adaptable to Mantua P.D. (pre-die casting) engines such as the Mogul, and the Belle, worth thinking about when metal eases up. I wonder how much of a job it would be to slip a Roundhouse Goat cab on a Belle boiler, install straight stack, alter the fire-box, and get a 4-4-0 camelback?

F. W., Hellertown, Pa. solves the wide radius curves for tin-plate problem for us. On his old 3-rail system he used regular Lionel track, 31" diameter, on the inside, and American Flyer O gauge, 38" diameter on the outer track. This old A. F. wide-radius O track was 12 sections to the circle and lots of it must still be around in attics. That's a good solution for the fellow who can locate some, but I was looking at a long term solution, so anybody could do it.

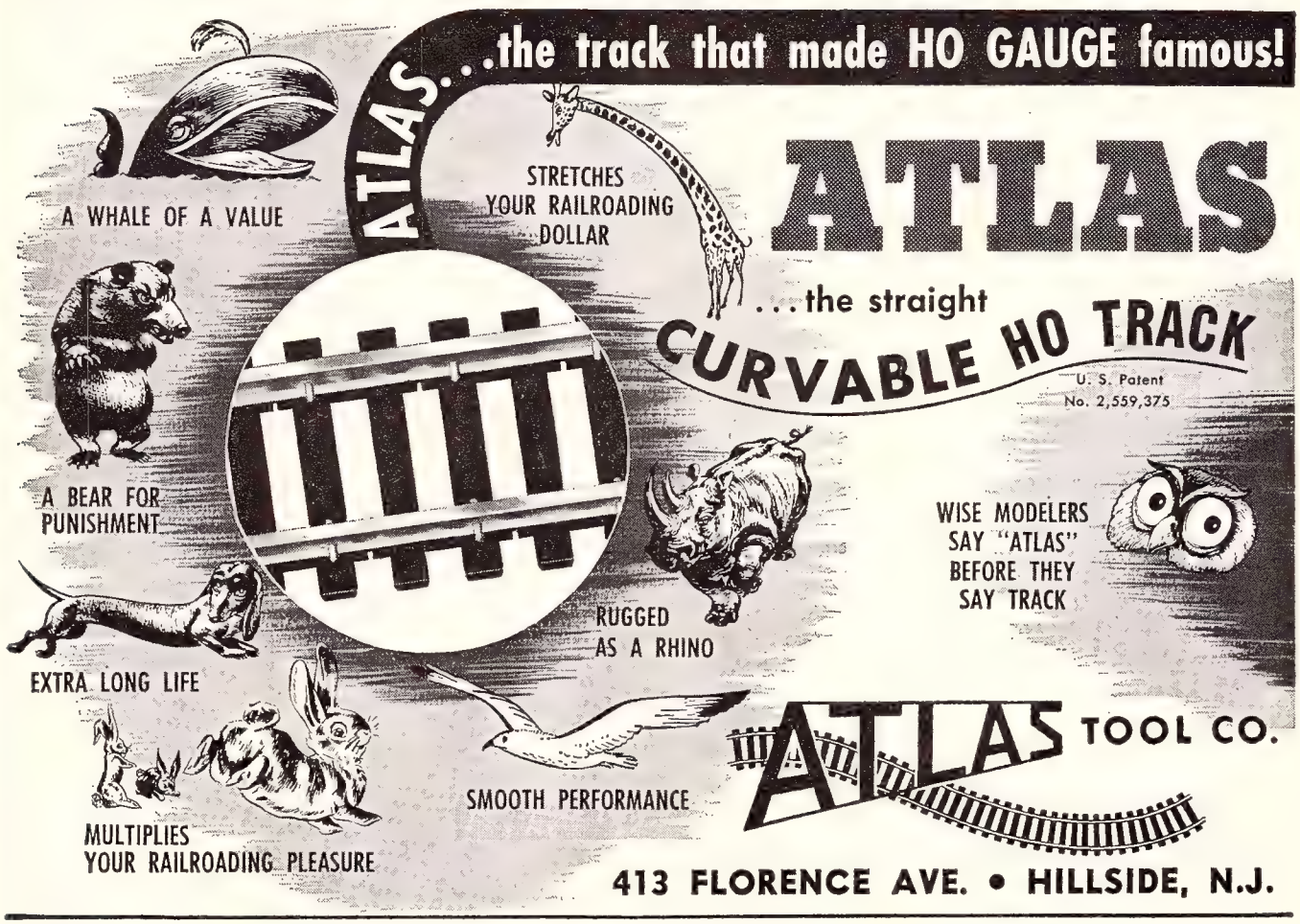
K. W., Kirland Lake, Ont. thinks what's needed is a less expensive power plant. Diesel rail-cars, gas-electric cars, trolleys, etc. do not require the same power which would be required in a large steam type loco, so why not have less powerful motors or drive trucks and save money . . . . A good idea, although my idea would be not so much to save money as to save space and get an under-floor HO motor for such cars. A comparison of prices of DC-71 and DC-60 motors shows that if you made one still less powerful you wouldn't save a great deal. What might help would be some new idea in a motor. Maybe that ol' Electrotor (June, 1950 RMC "Good Idea Gone Wrong") could be adapted.

. . . Quickies

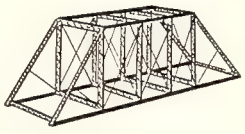
A PITTMAN trolley freight motor can furnish power for an O gauge short line and still be true to prototype. After the demise of the Cincinnati & Lake Erie interurban and the Indiana Railroad, several of their motor freights were converted to diesel electric operation by a firm and sold to gravel pits and other types of short lines around the central states. Externally, except for lack of poles, they still looked like box motors since the diesel engine and generator was inside the body. These cars are powerful enough to pull as long a train as a short line ever wants to run.—*Bill Willmore*

SMALL beer bottles, washed, then painted a dirty gray or brown make pottery kilns. They may be covered around the bottom with brick paper and a black cardboard door added for an outside kiln. Or several may protrude through the roof of a building for indoor kilns.—*Robt. McNarney*

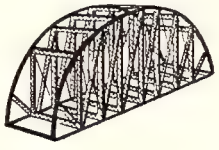
ONE half of a five and ten cent store tin globe makes a good round bottom for a water tank when painted. I made the tank itself from a tomato paste can and the legs from balsa wood. The ladder is regular HO freight car ladder.—*C. N. Hecht*


ATLAS...the track that made HO GAUGE famous!
A WHALE OF A VALUE
STRETCHES YOUR RAILROADING DOLLAR
ATLAS
...the straight
CURVABLE HO TRACK
U. S. Patent No. 2,559,375
A BEAR FOR PUNISHMENT
WISE MODELERS SAY "ATLAS" BEFORE THEY SAY TRACK
RUGGED AS A RHINO
EXTRA LONG LIFE
SMOOTH PERFORMANCE
ATLAS TOOL CO.
MULTIPLIES YOUR RAILROADING PLEASURE
413 FLORENCE AVE. • HILLSIDE, N.J.

BETTER BRIDGES
Make
BETTER RAILROADS



Single Track Kit $2.00
Double Track Kit 2.25
Use several spans for a long Bridge.



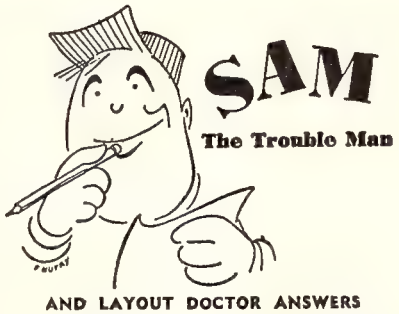
Single Track Kit $5.00
Double Track Kit 5.50

MANTUA Bridges require soldering, but as you become a senior model railroader you must learn. Here is a simple job—ideal for a start before you tackle the more difficult ones. Sure there is a place on your line for a bridge and a MANTUA Bridge will look just right.

Ask your Dealer!

MANTUA

FIRST IN HO



AND LAYOUT DOCTOR ANSWERS

This Department is for the benefit of all readers. Questions will be answered through these pages or direct by mail by one of the country's leading model railroad authorities. If you have any building kinks of your own, send them in.

Adding A Pilot Truck

I HAVE a Mantua Mighty Mite 0-4-0 switcher and would like to add a two wheel pilot truck to it, making a 2-4-0. How much do I have to move the pilot out to clear this pony truck? Also, do I swivel the pilot truck from the cylinder mounting screw or where? . . . *James McKee*

ANSWER: Assemble locomotive temporarily without the pilot beam, and place on sharpest curve you want it to go around. Place pilot wheels on track and bring them up as close to the front of the engine as possible without their touching the frame or cylinders. Then hold pilot beam in at right angles to the frame (not to the track) and at approximate height, and move it as near the pilot wheels as it will go without touching them. This way you can find how far out you must locate the pilot beam for any size wheels, any engine, any radius curve. You can get pilot beam closer by filing the frame or gouging out parts of the insides of the cylinders. Or you can use smaller pilot wheels such as hand-car wheels.

If your pilot wheel is already part of a pony truck, you can locate the place for the mounting screw which must be on the center line of the frame of course. If this new site conflicts on some screw already in place, make and mount a new tongue for the four wheel truck that is a little longer, so the hole will be back far enough to clear or perhaps to take advantage of a present screw-hole. I can tell you that the site will not be the cylinder mounting screw: it will likely be back at or close to the front driving wheels.

Drive Wheel Trouble

WHAT can I do for an HO engine with an eccentric driving wheel? I would like information on how to correct this. . . . *N. L. N.*

ANSWER: Beg pardon, but I'm inclined to believe that your wheel is not eccentric, since the center hole was drilled, the outside turned, and the tire made all in a lathe. The resulting assembly, if a commercially made wheel, is bound to be concentric unless the wheel has been abused (in which case it should be replaced). My guess is that the wheel appears to be eccentric due to worn bearings or axle. You can check this by grasping the wheel firmly and checking the amount of side play: the push of the driving rods tend to exaggerate this. If too much side-play is present, you need new bearings or a new frame, depending on how your loco is made (possibly a new axle).

The only way to correct an eccentric wheel, if it is that, is in a lathe with a cutting tool. If the bearings are good, results of a sort may be made by revolving the wheels under power while a file is held above bad wheel so as to knock off the high spot. Do not hold file against the wheel or it will simply file smaller and stil eccentric. This has to be done twice, once for the tread, once fo the flange. Actually the best thing to do would be to buy a new wheel or pair of wheels of the same make and size.

Equipment for Small Space

BUILDING HO equipment for the past year, I now have sixteen cars and a yard bird switcher. The space I have in the cellar is 3' 6" by 11' 0", where I intend to build a layout. Can I use a Pacific type engine on this layout? What engines can I use? Should I use #6 or #4 switches? What radius? . . . *Ralph Peterson*

ANSWER: Here's how to figure the maximum radius curve you can

HOW TO BUILD
A MODEL RAILROAD
A BEGINNER'S MUST-A REFERENCE BOOK FOR VETERANS

A complete, practical explanation of Model Railroading including track design and laying, locomotive and car construction methods, scenery construction tips and general information of model railroading to date.

This third Edition of HOW TO BUILD A MODEL RAILROAD has been completely revised and is right up to present day standards. It has many new plans and illustrations (more than 75 are included). "How To Build" will answer all the questions asked by the man who is starting a miniature railroad layout as well as the problems encountered when a model railroad has gotten underway.

"How To Build" is spiral bound to permit pages to lie flat, a great convenience while working. This is a book you will want to read, and reread—and have available for immediate reference! Once you have digested the contents of this great book you will be a full-fledged model railroad enthusiast.

Whether you are a beginner or an experienced builder, your library is not complete without this book. Price, postpaid, is $2.00.

If you do not wish to mutilate your magazine enclose remittance with letter.

RAILROAD MODEL CRAFTSMAN
Dept. H3
Ramsey, New Jersey

Please Rush me my copy of How To Build A Model Railroad. Enclosed is my check .... money order ..... in payment.

Name .....
Address .....
City ..... Zone ..... State .....

have on any given width in HO gauge. Subtract four inches clearance at edges from the width, leaving 3′ 2″. Divide this by 2, giving you a radius of 19″. Now you can get a Pacific type around there if you will file the flanges off the center pair of drivers, in fact you should be able to get it around 16″ radius curves. Some little finagling with pilot truck, trailing truck, and draw-bar to tender may be necessary. Unless you want to finagle, stick to engines with only four driving wheels such as an 0-4-0, 4-4-0, 4-4-2, or diesels. With 19″ maximum curves, use #4 switches which have a radius of from 18″ to 20″ and so work very well. #6 switches have a radius of about 36″.

Uneven Power Furnished

A RADIO-HAM friend of mine built up a rather elaborate control panel for me which is full of relays, switches, lights, etc. and it is really a dream. However on my railroad, which consist of twelve blocks altogether I notice that the trains run slowly at some spots. I have bonded the rail joints, without much effect. The blocks are not very long. What help can you give me?—*Ken Sitte*

ANSWER: It might be such a thing as too steep a grade, too tight a track gauge, or too much grease on the rails. My guess is that the wire used in the control panel or other wiring may be too light for the current drawn by your locos. Even if wire is adequate in size for some engines some places, perhaps on the long runs there is too much resistance and voltage drop, hence your engines slow up. Try this: move your power pack directly to the slow section and run wires, directly to track and see if the engine moves fast enough? If not, try doubling these wires or using heavier ones. Then try using heavier wire or double wire from panel to track. It is easy to run a second wire running to the same terminals as another one: just do it temporarily at first till you see how it works. Leave these in place, and try running heavier or doubles wires from power pack to panel. Last get into the panel and double any wires (for one block as a test) that carry 12v. D.C. for train propulsion. This does not apply to wires that only work relays, signals, lights, etc. I am pretty sure that by doubling all wires from power pack to track you will clear up your difficulty.

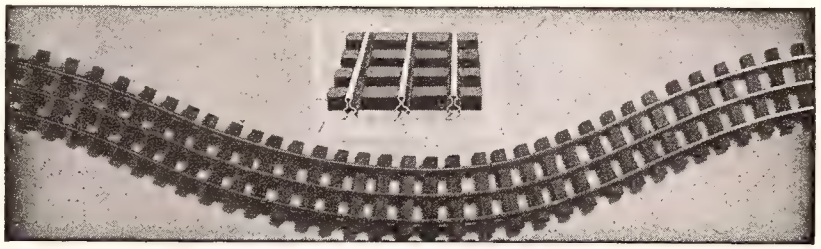
FOR mixing small quantities of paint, any jar lid or small container will do, but I save bottle caps and pry out the cork insert. Being forced to mix a smalled quantity there is even less wastage than with larger containers.—*G. Nachamson, Jr.*

IN making your own switches and crossings, you do not need to worry about getting the correct width of flangeways if you butt the bases of the running and guard rails together. This is true in HO and O gauges.—*Thos. Neily, Jr.*

GARGRAVES' UNIVERSAL TRACKAGE

For Scale or Tinplate (the PERFECT Hi-Rail or Hi-Iron)

This is GarGraves' patented, flexible, Universal track. As the illustration shows, the steel rails (3/16″ high) and wooden ties are built to the exactly correct size and shape for O gauge scale. The patented feature of construction, which eliminates spike heads (thereby permitting tinplate flanges to run perfectly on scale rail), and which permits curves of any radius to be easily bent, is built into the rail and lies below the web of the rail, and does not in the least detract from the perfect appearance of the track. Available in regular or stainless steel.



Our stainless and regular steel trackage are both magnetic.

GarGraves Universal trackage is made in three types. That shown in the cut is the INSIDE THIRD RAIL TYPE.

It mates perfectly with any Lionel trackage except OO, American Flyer trackage except HO and 7/8″ and any Marx O gauge trackage. GarGraves is also available in TWO RAIL and in TWO RAIL with every fifth tie longer so the user can install his own Outside Third Rail.

GarGraves is the only truly UNIVERSAL track ever manufactured! It may be used with any type of O gauge trackage that you are now using. It may be mated to Lionel (027, 072 or O Gauge Scale), or Marx track, or to any other make of rail or switch, either Scale, Tinplate or HI-Iron.

COMPLETE TRACKAGE FACTS FOR ONLY 3c STAMP

See your dealer first, or write to

Gardner, "THE TRAIN DOCTOR"

Where Railroadin' Is a Business, NOT A SIDE LINE

2261 DEWEY AVENUE **Lionel Factory Approved Service** **ROCHESTER 13, N. Y.**

If your track is not RIGHT, your operation will not be RIGHT, regardless of how much your rolling stock costs. Good Track is the foundation of Minature Railroading enjoyment. Get the best. Best by all tests GARGRAVES TRACKAGE.

IF IT'S FOR MODEL RAILROADING, WE HAVE IT, CAN GET IT, OR IT ISN'T MADE
LIONEL FACTORY APPROVED SERVICE — YEARS OF KNOWING HOW.

New 1952 Catalog—

MANY NEW ITEMS

1½″, 1″, ¾″, ½″ and (O-gauge) scales. ALL CASTINGS, RAIL, VALVES, STEAM FITTINGS, ETC. EVERYTHING FOR STEAM LOCOMOTIVES. EXCELLENT DRAWINGS with instructions.
DRAWINGS and WRITTEN INSTRUCTIONS by MARTIN S. LEWIS (using his original "Step-by-Step" method of construction) available as follows (in Bound Form):

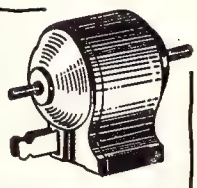
¾″ scale, classes 4-6-4 & 4-8-4 .....$3.00
½″ scale, classes 4-6-2 & 4-8-2 ..... 3.00
¼″ (O gauge) classes 4-6-4 & 4-8-4 ..... 3.00

LITTLE ENGINES

Box 15-A **Wilmington, California**

Our complete new, 75 page catalog 50c

The Most Useful Train Accessory Yet Devised MODEL PIKE'S



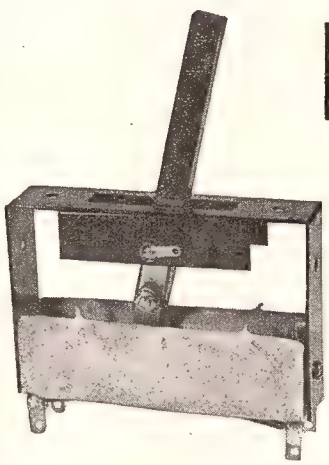
"DYNA-MITE"

1½ TO 6 VOLT MOTOR

The "Dyna-Mite" is a powerful little motor. Built to withstand rugged use. It has a permanent Alnico V magnet. Easy to install and hook-up. Only $1.98.

At Your Hobby Shop

MODEL PIKE PRODUCTS CO., NEW YORK 17, N.Y.



POWER...

. . . at your finger tips!

Bob Peare

LEVER ACTION REVERSING RHEOSTAT—$5.45

No DPDT Switch Required

Makes your control panel look . . . and feel . . . like a real railroad control board. Gives you smooth, instant finger-tip control of train speed . . . forward or reverse . . . with one easy continuous motion. No DPDT switch required.
Complete unit, ready for installation with full mounting and wiring instructions, only $5.45.

R-40 for HO & TT **R-20 for S & OO**
R-10 for O Gauge

Send 25c for the new BOB PEARE 1952 catalog. Complete line of trackage equipment and freight cars for both scale and tinplate modelers.

Bob Peare **ENGINEERING CORP., Clifton, New Jersey**

MARN O POWER

MARNOLD COMPANY

has MOVED to

Larger Quarters in Our Own Building Located at

136 W. WASHINGTON STREET
WEST CHICAGO, ILLINOIS

Mail Address P. O. Box 206

On the C & NW Main Line to the West

AD-A-PANEL

ROTARY SWITCH MOTOR

Complete with wiring diagram. Positive control. Spring return. Mounting plate. Designed for continuous working load. Price $1.24 each. Minimum order, two.

TEN-DAY MONEY BACK GUARANTEE

Send check or money order. No C.O.D. please.

We pay postage.

DUDLEY LeROY CLAUSING
824 Central Ave., Dept. 33, Highland Park, Illinois

MANTUA PARTS
We have the parts you need to keep your locos and cars operating or for free lance building. Pittman, Mantua, Athearn HO & O, Varney Always in stock.

Russ Webber's
Tucson Train Shop
4352 E. Speedway, Dept. MC, Tucson, Ariz.

Alco Diesel
"B" UNIT

SAME HIGH QUALITY AS OUR "A" UNIT

NOW

Lindsay Products, Inc.
5645 Selmaraine Dr.
Culver City, Calif.

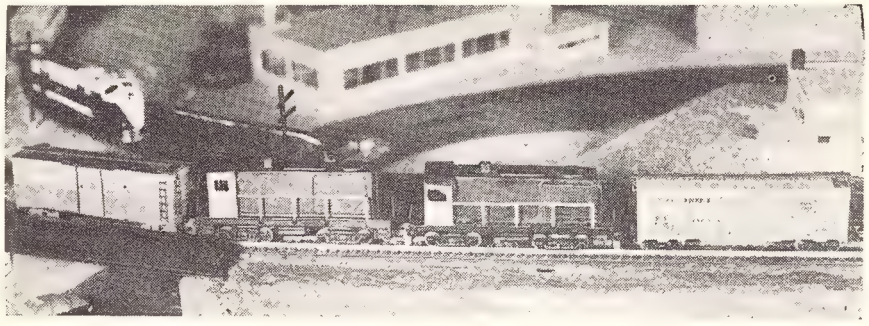
Lindsay PRODUCTS

"Off'n the table top"

NEWS AND VIEWS OF TT

BY Glyn Lewis

THE smoke clears, the judges come out of their huddle and a winner is announced. Wait—and another—Yes, a first and a second in our M.U. conversion contest. First, with a well detailed model of a trolley loco complete with operating trolley pole and pantagraph (powered from overhead or 2 rail), is Erik Neilson, of the Bronx, N. Y. In second place, Mr. H. R. Collins, of Southington, Conn., who converted his M.U. car and coach into a twin unit Diesel switcher (Alco type). Mr. Collins reports no loss of pulling power due to the shortened wheel base. . . . Well done, gentlemen— thank you—and thanks to all the "rails" who submitted pictures. Your interest is an inspiration. Next month we hope to be able to explain how Mr. Neilson put the M.U. motor—2¾" long—into the 2½" cab of the loco. . . . To mention a few of the ideas that you fellows thought of in converting your M.U. cars; four and eight wheel trolleys, Alco Diesels, Gas Electrics, and many more.



Twin unit Diesel Switcher converted from standard MU Car kit

WHAT'S NEW?:

Well, first of all, its a little early (around here, anyway) for the grass to be coming up—but how about that on your layout? Ideal Models have the answer in their new Sceni-Kote Flocking kit, which contains four bottles of flock (rayon fibers, cut to 1/16th inch length). Yellow, green, brown and silver-gray, with which you achieve any outdoor effect. Also included is adhesive, and a rubber sprayer with a small nozzle opening, which allows the modeler to direct the flock to a specific area—with one hand operation! A very good item, reasonably priced at $3.95 for the complete kit. For details, refer to M3152. See page 50.

SWITCH MACHINE:

A new, cleverly designed switch machine, the "Polaris", made by Pioneer. Built with a new adjustable escapement link principle which makes it truly an "all gauge" switch machine that can be mounted exposed or concealed. Complete with Automatic Polarity control concealed mount conversion parts—operating on AC-DC momentary 10-24 volts. We find it to be a sturdy dependable machine—retailing for $1.95, complete. For more data, refer to M3252, page 50.

TT TIPS:

Next time you're in a hobby store, take another look at the Aeroplane and ship model department. The aeroplane counter will yield balsa and bass wood in sheets and sticks of all thicknesses—just the thing for your buildings. Ship section has railings, ladder, stairways, etc., that are really great for trackside structures. Take a look at the brass cannon too—Say, how would that look in the park? Just right for that small town with its Civil War or Revolutionary monument! Oh yes, and while you're at the airplane counter, get some clear dope—just what you need to make that lake or river look really wet.

FROM THE TT MAIL CAR:

From Racine, Wis., George Gorley writes: "I have an Argus C3 camera (35 mm), and want to take pictures of my pike, but find it impossible to get less than 3 feet from subject. Guess I should write to a photo mag, but know you'll help me if possible." Thank you, George. First get an Eastman Kodak Series 5 portra lens (they come in 1, 2, & 3 diopters). The number 3 will let you get down to 9 inches. But you must allow for parallax—Instructions on how to build a frame to accomplish this are on the way to you—O.K.? Bill Healion, of Chicago has some complimentary things to say—and is interested in trolleys. Watch the column, Bill—Trolleys are comin'!

A nice, fat letter from Robert L. Pearson, "bustin'" with questions—too many for this space. So, a letter has gone off to you, Bob.

First Prize Winner—a trolley loco!

Scintilla's NEW 1952 illustrated catalogue is *now* available at your dealer.

Besides photographs of and descriptive data related to, Scintilla Power Packs, Power Kits, Control Panels, and General Accessories, the new catalogue includes helpful technical information.

So get your FREE copy TODAY from your local dealer or, by mail, from our factory office.

SCINTILLA RAIL & POWER WORKS, INC.

324 Lafayette St.

New York 12, N. Y.

LOBAUGH

Standard of the world in O gauge!

Send 15c (stamps or coin) for new catalog. Lists all new kits as well as other items new since our last catalog.

Rollin J. Lobaugh
566 So. Van Ness, San Francisco 10, Calif.

LAYOUT DESIGN SERVICE: $5 per 100 sq. ft., minimum, any gauge, with scenic ideas, 2-railing

WILLIAM SCHOPP
445 S. Logan Ave. Trenton 9, N. J.

USED HO LOCOMOTIVES at less than kit prices: send stamp for annotated list.

The Scrap Box

If you know of any ways of utilizing "scrap" or "junk" on a model railroad, tell us and our readers about it; we will pay one dollar for each suggestion.

I RECENTLY bought a new soldering iron when it seemed that the solder was caking on my old one, even though it was hot, like so much fudge. The new one proven to do the same thing. An old plumber I talked to asked me if I bought my solder in a five and ten. When I told him yes, he said try a hardware store and ask for 50-50 solder (half tin, half lead). It seems that owing to high prices of tin, five and ten solder has been getting an increasing proportion of lead, less of tin, which makes it flow less freely. Sure enough, the 50-50 solder flowed like old times and I was back in business. My hardware store had only bar solder which was too big to work with so I hacked off chunks, melted them in an old aluminum pan and poured into "ingots" on a piece of corrugated lamp carton.—*Niels Aronson*

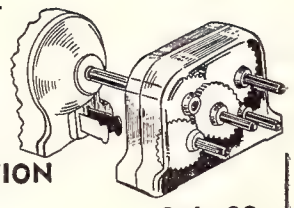
HERE is how to make one pair of couplers do for two cars. I use Mantua couplers and mount the loop on one end, the hook and lug on the other. Since my road has no reversing loops, all cars always face the same way. I improvise a pocket for one end or the other and obtain extra small screws from my dealer.—*N. Edson Merz*

SINCE I discovered that model railroad paint would flow nicely from a ruling pen, my passenger cars have blossomed out in many stripes, vastly improving their appearance. The pen should be washed in thinner after each job. Corner curly-cues may be added free-hand with a crow-quill pen dipped in the paint, or with a bow-compass. The striping color may be the same used in lettering. Some of mine are yellow on an olive green car, others black on a light green car.—*J. H. Morgan*

TO smoke up a tunnel portal, pass a candle back and fourth through it several times. This is recommended only for cast stone portals, not for home-made wooden or cardboard jobs. The smoke stain will be over the center of the track, of course.—*K. Manion*

IF small fry like to help Daddy run his railroad, consider putting a trolley line around a block in your model village. That is what I did, erecting only dummy overhead wire. I have a push-button to run the car, so that Junior has to keep his finger on it and not stick it in the pie elsewhere. Of course I have included a circuit breaker in the line for protection.—*J. J. Finch*

MODEL PIKE'S SPEED REDUCTION UNIT **Only 98c**



The speed reduction unit is designed for use with the "Dyna-Mite" motor. It is a miniature gear box in kit form. Full assembly application included with each kit.

At Your Hobby Shop

MODEL PIKE PRODUCTS CO., NEW YORK 17, N.Y.

S GAUGE

Largest and only complete stock of all S Gauge items, including American Flyer, in the U. S. A. Rex Engineering Dockside Loco. Kit in Stock $36.00

New 1952 Catalog and Handbook 40c

TT GAUGE

Complete catalog of all available TT Kits and Accessories 25c

HP Products MU Power Car. Ready to run $10.95

NIXON MODEL CO.
Box 514 Southampton, Pa.

S Gauge Railroaders

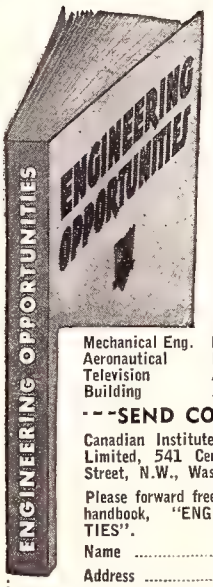
We stock products of leading S gauge manufacturers. Scale or tinplate. Send 25c in coin (refunded on first order) for our catalog.

LeRoy J. Vavrinek
1561 Walnut Ave. Des Plaines 2, Ill.

Everything for the Hobby Fans
We Build Layouts—We do Repairing
Complete Line in TT.
Lionel, Am. Flyer, HO, and O Gauge.

A HOBBY STOP
5545 N. Lincoln Ave., Chicago 25, Ill.
Ardmore 1-2417

THIS HANDBOOK FOR AMBITIOUS MEN ***FREE!***



Have you had your copy?

150 pages of guidance to best-paid positions. Up-to-the-minute information for men who want to climb to the top. Tells how to get promotion, security and better pay through home study courses. This handbook "Engineering Opportunities" is free and entirely without obligation. Send the coupon. Make this your big year! Describes over ninety courses including:

Mechanical Eng.	Electrical	A.F.R.Ae.S.
Aeronautical	Radio	A.M.I.C.E.
Television	Automobile	B.S. (Pure
Building	A.M.I. Mech. E.	Science)

---SEND COUPON TODAY----

Canadian Institute of Science & Technology Limited, 541 Century Building, 412, 5th Street, N.W., Washington, D. C.

Please forward free of cost or obligation your handbook, "ENGINEERING OPPORTUNITIES".

Name .....

Address .....

Course interested in..... Age.....

Canadian Address: Canadian Institute of Science 541 Garden Bldg., 263 Adelaide St. W., Toronto, Ont.

ANNOUNCING

railroad model Craftsman

MODEL BUILDING CONTEST

Through popular demand, we are going to inaugurate an annual model building contest, open to all readers of Railroad Model Craftsman who are non-professional builders. Cash prizes will be awarded to first, second and third place winners in four categories. The contest will be unbiasedly judged by three experts on a point system; merit points will be given on accuracy, adherence to prototype, choice of materials, neatness, clever use of detail and overall appearance. In case of a tie, duplicate prizes will be awarded.

FOUR DIFFERENT CATEGORIES

1. RIGHT-OF-WAY STRUCTURES
   This group will include such service buildings as roundhouses, signal towers, turntables, watchman's shanties, water tanks, wayside stations, etc.
2. SMALL SCENIC UNITS
   Bridges, tunnel portals, industrial buildings, street scenes, houses, etc. To qualify for contest, these devices must be mounted on a board together with a detailed surrounding (homes complete with shrubbery, walks, garage, back yard, etc.).
3. FREIGHT CARS
   This group will include models built up from scrap materials or from standard commercial kits. Close attention will be given to accuracy of work and amount of detail included.
4. PASSENGER CARS
   Includes coaches, combines, mail cars, etc. Same regulations as with freight cars.

HOW TO ENTER

To enter contest, submit a clear photograph of your model together with a brief description as to materials used, prototype, commercial kits (if any). Photos must be in our hands by June 30. If not clearly shown in photograph, point out any especially interesting detail. After our judges have carefully checked all photographs, owners of the best models will be invited to send them to our Ramsey, N. J. office for final judging. Don't send these models now, clear photographs only. Prizes totaling $200 will be awarded to winners of this contest: $25.00 for first place, $15 for second, and $10 for the third best model in each of the four categories. In case of ties, duplicate prizes will be awarded. Photographs of all winning models will be published immediately following close of contest. If your model fails to cop either a first, second or third prize, a photo of same might still be suitable for our picture pages for which you will receive $5.00 for each photo used.

To aid in the judging of this contest, please get your entries to us at the earliest possible date. If received early, we will suggest possible means to improve your model, to better your chances of winning. Please don't be bashful, get your entry in the mail pronto. Send them to:

CONTEST EDITOR

c/o Railroad Model Craftsman Ramsey, N. J.

Are You A Magnate?

ALONG with the gauge-changer, another sub-species of railroad modeler is the *magnate.* That is to say, one who owns many different model railroads—at least to hear him talk, to see his registrations with RMC, to see what is listed after his name in the NMRA yearbook. He not only owns a major railroad but a couple of affiliated short lines, a trolley line, an interurban line, a bus line, a Narrow Gauge Ry., etc. etc.

Believe me the above is not overdrawn. and, judging from correspondence, the most magnetic magnates are not even listed in the yearbooks or pike registries. The ironic part of it all is that the magnate probably has a ping-pong table on which he has a loop of track, one switch (one of the branch lines, you know), a pre-war A. F. Hudson without pilot and trailing trucks, three cars with assorted couplers, and an ancient station. The traction interests are represented by a Walthers Birney car that has been streamlined by the accidental passage of a blow-torch. Everything has been covered by three or four coats of paint as the roads' names and color schemes change. The various railroads do run, but the magnate has to spend so many hours keeping the corporate existences alive that he has too little time for maintenance, expansion, and just plain fun which model and railroading is supposed to be.

Does this step on your feet? Don't get excited, the numerous companies are something that can add to the pleasure of the hobby. It is only the extremist who make others smile at the excesses to which they carry this magnate business.

Having several railroads can be a lot of fun, and nothing to be ashamed of if you really have them. For instance if you have a branch line, give it another name and have at least one engine and a caboose lettered for it, along with an old passenger-baggage combine. Through passenger cars, work cars and extra engines can be rented from your big railroad when they are needed. When the branch engine, etc. needs repairs, they are done in the big road's shops. You may even have engines and cars from a road which doesn't even exist, in fact, but connects with yours somewhere down yonder: Reading, B&O and Jersey Central engines can all be seen in the Central's Jersey City terminal!

If you have an old piece of rolling stock that would, on a real road, be about ready for the junkman, have it lettered for the predecessor of your line, perhaps the same name with Railroad instead of Railway or vise-versa. Maybe its next overhaul will see the correct name affixed, or maybe the old name is retained in order to keep the franchise rights.

The same remarks apply to trolley lines and interurban lines. The So-and-So Traction Co. uses just your city streets, while the Interurban line uses the city streets *and* runs on out into the country. Maybe it even uses the steam railroad tracks for a distance to avoid congestion.

. . . the Galloping Gosling

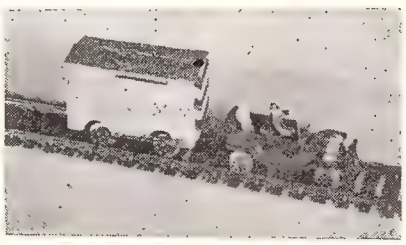
"WHEN smaller HO motive power is built, Bill Schopp will have a foot in it," said the caption to my article on Little Louie in the July, 1951 RMC. Brother Thompson, who penned those immortal lines, must have meant . . . "have an *inch* in it" not a foot, because they do keep getting smaller and smaller. The current wonder is the Galloping Gosling, a freight and passenger "train" for an HO railroad, or, if you will, a roadmaster's inspection buggy. Briefly the Gosling is a Hi-Ball Rail Jalopy pulling a small box-car in which is hidden a Kemtron "Teaspoon of Power" motor truck. Just the thing for that rusty branch line which the ICC won't let you abandon! Just the thing for your rail gang, too.

Bill of Materials

1 Kemtron Teaspoon of Power motor truck	$14.00
1 Kemtron Brill Rail-bus pilot only	.50
2 pr. Model Die Casting hand-car wheels only	.40
1 Hi-Ball Rail Jalopy plus scraps of wire and fibre	2.25
	$17.15

Your first step if you want to build one, is to take the Hi-Ball Rail Jalopy and break off the fixed wheels and axles; contribute them to the scrap drive. Then cut off the front bumper and drill holes down low at sides of radiator into which you later insert specially bent wires to which the pilot is soldered. Also drill a hole in center into which you can bend and insert a crank. No special size holes, just what you have that will fit the wire on hand. Also drill a vertical hole at the rear, underneath, into which you will insert a wire pin to mount the coupler.

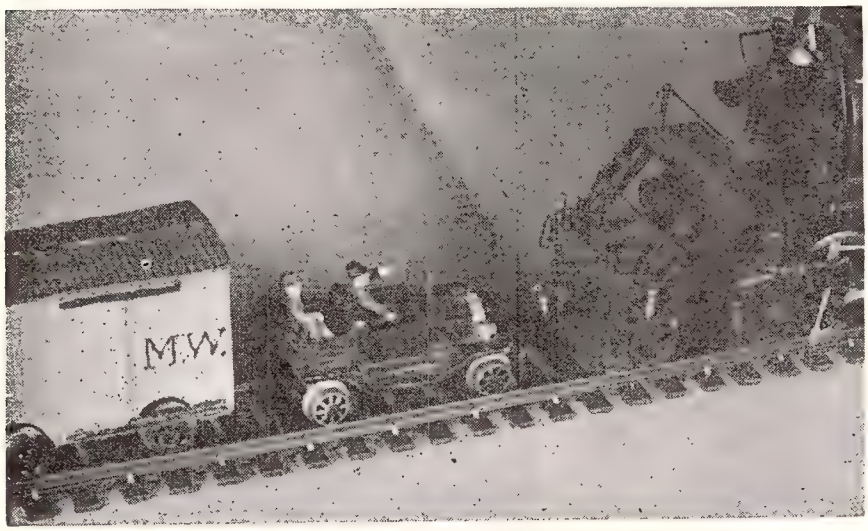
Where the old axles used to be, file out clean and cement in tight coils of any wire (I used copper) wound around a nail little bigger than the MDC hand-car axle. You make these by chucking the nail in a hand-drill, inserting the wire in a space in the chuck, and winding away. Remove *un*insulated handcar wheels from axles, insert axles in these new bearings, then remount uninsulated wheels. Be sure both are on the same side of the jalopy.



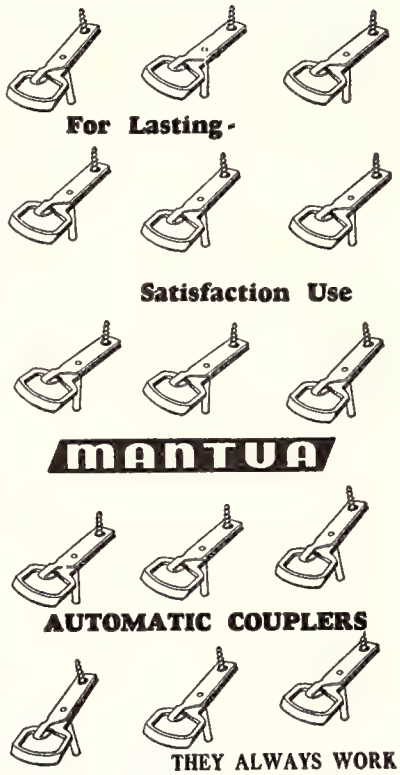
The roadmaster's inspection buggy and the hidden motive power.

There is your passenger car ready to run. Be sure it coasts well and if necessary rout out inside the mudguards so the wheels will not touch and possibly short out. Insert crank, solder on pilot, and slip a fibre draw-bar over the pin at rear. Cement or solder a tiny washer of wire at end of this pin so draw-bar will not drop off. Complete Jalopy, as per directions, with windshield, men, etc. only omit the marker lights.

Check your Teaspoon of power, then build a little car from wood or cardboard or even metal to fit over it. The photo should give you some idea of mine, but perhaps you can improve on it. My car



Something has to give when the inspection buggy meets a giant of the rails. A Kemtron motor truck provides the source of power.



THEY ALWAYS WORK

Start right with Mantua Automatic Couplers, they have been standard for HO for the past fifteen years.

Freight - Auto-Couplers ..... 35c set
Passenger - Auto-Couplers ..... 50c set
Uncoupling Ramp ..... 50c ea.

Ask Your Dealer

BUILD YOUR BRIDGES, TRESTLES, TOWERS OF METAL FOR REALISM—USE
MODEL STRUCTURAL SHAPES OF BRASS
ANGLES—CHANNELS—H COLUMNS
TEES—ZEES—I BEAMS
.. Flat, Round & Square Bars—Sheets
Manufactured by
SPECIAL SHAPES CO.
2445 LOGAN BLVD. CHICAGO 47, ILL.
At your dealer or write for price list

MODEL RAIL TIES

250 Lionel O27 and O	$1.00
250 American Flyer	1.00
1000 O-S-OO	2.00
1000 HO Ties	1.50
Right-O-Way Kit	.35

HOBBY NOVELTY SHOP
314 N. Warren Saginaw, Mich.

FOR THE LIFE of Your Model Railroad Use MODEL PIKE TRACK CLEANER

Model Pike TRACK CLEANER

Use Less . . . Do More

Cleans—Scale, Tinplate, Brass, Steel and Aluminum. No elbow grease required. Rub it on . . . wipe it off! It's as simple as that. Only 98c.

At Your Hobby Shop
MODEL PIKE PRODUCTS CO., NEW YORK 17, N.Y.

Mail This Coupon...and

SAVE UP TO $2.60

You probably have noticed it at your newsstand. *More and more people are reading Railroad Model Craftsman.* So, in some places you really have to be an "early bird" to get the latest issue.

This popularity trend is going to continue . . . because Railroad Model Craftsman has assembled the finest group of writers obtainable. Make sure . . . now . . . that YOU are going to have every one of these big, important issues for your reference files.

Make sure . . . now . . . that YOU are going to have every one of these big, important issues for your reference files.

Just fill in the coupon below and mail it . . . today. Then every month . . . for one, two or three years (as you choose) . . . the postman will bring Railroad Model Craftsman right to your door.

Just think! On a 3-year subscription you actually save $2.60. . . . more than 7c each time the postman hands you a copy.

Date .....

RAILROAD MODEL CRAFTSMAN
Dept. S352, Ramsey, N. J.

Gauge .....

Please send Railroad Model Craftsman directly to my home starting with the February, 1952, issue (next month) and continuing for ( ) one year, $4.00; ( ) two years, $7.00; ( ) three years, $10.00. Outside USA please add 50c per year.
( ) Enclosed is payment ( ) Bill me on February first.

Name .....

Address .....

City and State .....

body is ¾" wide, 1¾" long, and 1" high. This is higher than it needs to be because I found that I needed some weight to make the "Teaspoon," with only two wheel drive, shove the Jalopy which does not exactly have needlepoint bearings. My weight is simply wire solder bent back and forth and wedged into the space above the motor. The motor attachment screw runs down through the roof and through this mass of solder into the top (and only) mounting hole on the motor truck. A wire pin is shoved up into the floor at one end of the box car so that it can be coupled with the fibre drawbar on the Jalopy.

After painting, the marker lights may be mounted at the rear of the box car.

You will find that this Gosling will run very well at low or high speeds thanks to the excellent Lindsay workmanship in the motor truck (Lindsay built them for Kemtron). However because the Jalopy is rather light in weight, it has a tendency to locate flaws in your trackwork you didn't even realize existed. Switch points must be kept level and to a feather edge, rail-joints must be smooth. The best place for running is where there are not too many switches, as out on the main line.

FOR large size piping on HO locomotives, use wire solder which comes in various diameters and is easily bent to any shape. However it must be held in place with cement or pins and must not be located until all soldering is done on nearby boiler parts. It is also handy for forming traps in overhead steam lines around a terminal. On an O gauge system, I think thin wire solder could be used to form a realistic telephone cable, supported by a lighter messenger wire with little loops as on a real cable.—*Jack Melli*

MY O gauge 2-rail pike is located in the cellar, along with a coal fed heating furnace which seems dirtier than most. Consequently, after a few days of inactivity the rails of the line are so dirty that passage of locomotives is jerky because of poor contact with the rails. After years of track cleaning by hand, I secured an O gauge wind-up engine which pulls my home-made tack cleaning car around. This worked so well that I recently acquired a very long-running foreign made mechanical engine which does an even better job since it does not have to be rewound as often. I think this would be adaptable for HO gauge too, since I have seen foreign made HO wind-up engines.—*Harry L. Thompson*

TO tell which post of your D.C. power supply is positive or negative, immerse leads from both in a glass of salt water. The wire around which bubbles gather is the negative, the other positive.—*W. L. Norris*

Planning
a layout design

by The Layout Doctor

THE many proposed layout drawings submitted to me over the past years have had several general faults. One of these has been lack of accessibility to switches, which I have discussed before. Several of the other faults can be lumped into one category: lack of a real scale drawing of the layout. Surely anyone who proposes to go into *scale* model railroading must know what a scale drawing is, but the rather widespread allergy to use of a compass and ruler is hard to explain. In some cases, I think, it is due to lack of knowledge of just how a layout should be drawn: impossible curves, impossible grades, impracticable collections of turnouts—these are the chief outcomes.

Choice of Scale

What is a good scale to use for a drawing of a model railroad layout? In almost universal use is a scale of 1″ = 1 foot. Actually, this is about as poor a scale as you could pick, because a ruler divided into twelfth of an inch is a rarity. Yes, a triangular architects scale has one of its edges so marked, but this is a very awkward tool to use. Graph paper, a popular medium for layout drawings is not available so divided except in notebook size. Still, one inch scale is a not too unhappy compromise between the handy, but too small (for HO, anyway) ¾″ scale, and the rather cumbersome 1½″ scale. One inch scale can be measured off with a ruler quite easily in units of 6″ (represented by ½″), 3″ (represented by ¼″) and 1½″ (⅛″ on the ruler). It is when you get to 2″, which would be represented by 1/6 inch on the ruler, that 1″ scale breaks down; and 2″ is a very popular measurement since it is the common center-to-center of parallel tracks distance in HO gauge. However, 1/6″ can be estimated with sufficient accuracy if you mark off ½″, then divide it by eye into three equal parts.

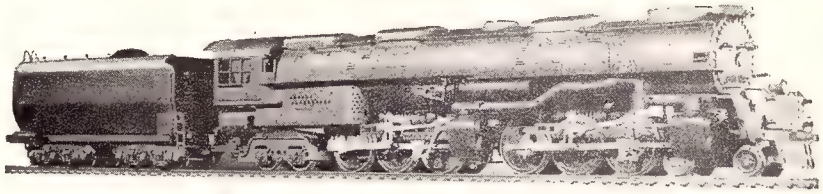
¾″ scale is too small for anything but S or O gauge, or possibly a compact drawing of a large layout, but the advantage is that 1/16″ on your ruler represents 1″ on the layout-to-be. Similarly, in 1½″ scale, ⅛″ on your ruler stands for 1″ on the final layout. This is a very good scale if you want to make anything like a working drawing from which you can scale distances with any degree of accuracy. But for any but a comparatively small layout, a 1½″ scale drawing gets pretty awkward to handle. Conversely, the ¾″ scale is too small to be very accurate: that is why I say that 1″ scale is a not too unhappy compromise. If you do much drawing in one scale or the other, you will find it a bit confusing to your spatial thinking to change to a different scale.

What tools are needed to draw a layout? A drawing board to which the paper should be fastened, a T-square (main-

AFTER 14 YEARS...
STILL THE FINEST AND BEST
GLUE
Tru-Scale
Any product that has won high acclaim and recognized superiority is bound to have imitators. Tru-Scale Roadbed has had its share!
After 14 years of producing the FINEST and BEST in roadbeds, Tru-Scale is still the track of perfection. Tru-Scale may be imitated, but never duplicated!
THERE'S NO SUBSTITUTE FOR PERFECTION! For realism, practicability, and economy you will eventually use Tru-Scale! Why not now?
At all better model shops. Write for our FREE instructive folder and sample in your gauge. Box 217, San Dimas, Calif.
Tru-Scale Models
2212 SUNSET BLVD. LOS ANGELES, 26

HO ENGINEER'S DREAM COME TRUE

4-6-6-4 Challenger Articulated



The HO loco that has everything you've dreamed about . . . Bowser's Challenger Articulated. Super power . . . tremendous size . . . graceful lines . . . smooth operation . . . accurate scale . . . exacting detail. Order now to be sure of delivery. $52.50 less tender. Semi-Vanderbilt type Tender $8.50 with trucks, $6.75 less trucks.

A few Pacifics and Mountains still on dealers' shelves.

by the specialists in HO road locos

Bowser

REDLANDS, CALIFORNIA

Ask your dealer for that

NEW DEVORE COUPLER

with the knuckle that automatically opens when it becomes engaged with another coupler.

Now available in HO, O and American Flyer

DEVORE

Box 207 So. Pasadena, Calif.

Celastic* Kits for Model Railroad Scenery

COLLOID TREATED FABRIC

Tunnels—Mountains—Landscapes in Minutes.

● NO FORMS ● NO SCREENING ● NO PLASTER ● Dries Hard in 30 Minutes

Introductory Kit . . . $2.95

Kit #2 . . . . . $7.95

Kit #3 . . . . . $12.95

See your Hobby Dealer

UNITED DRAFTING PRODUCTS

(Eng. Hobbies Div.)

63 W. 38th St., Room 905, New York, N. Y.

Dealers Inquiries Invited

*Trade Mark of the Celastic Corp.

We did, mister. And if you (or your boy) own any Lionel, American Flyer or Marx equipment then Toy Trains is required reading.

Here at long last is a monthly devoted to model railroading at the toy train level. This big, new publication gives step-by-step information on how to get started . . . how to make your present train set a year-round fun filled hobby for you and your boy.

Each issue bulges with articles on lay-outs, scenery, signal systems and dozens of other exciting projects. Tells how to combine tinplate with scale . . . how gradually to convert completely to scale.

Yes, Toy Trains is your magazine—edited exclusively for you, the tinplater.

At least 52 pages

- **Sharp, clear printing**
- **Pictures in color**
- **Pre-tested plans**
- **Easy-to-follow diagrams**
- **Lavishly illustrated**
- **Simplified text**

Written by top-flight authorities. GORDON ZERN (former editor of Model Builder), HENRY B. COMSTOCK (former editor of Railroad Magazine), FRANK ELLISON, LAURENCE GIERINGER, WILLIAM SCHOPP.

TOY TRAINS, Dept. NM, Ramsey, N.J.

Please enter my subscription to Toy Trains for

1 Year	2 Years	3 Years
($4.00)	($7.00)	($10.00)

add 50c per year for outside U.S.A.

Bill me in one month. It is understood, if at any time during life of subscription, I become dissatisfied, pro-rata amount due me will be refunded.

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

Save $1.00 on any subscription and get one additional issue free by enclosing remittance. 3MC

ly for drawing the walls of the room), a *transparent* triangle (for drawing parallel lines without recourse to exact drafting methods), a ruler or scale, a compass, a pencil, and most important an eraser. I recommend nothing harder than 4-H lead for the pencil, because harder lead makes lighter lines and there is a tendency to bear down to make the lines more visible: such lines are impossible to erase because you have dented the paper! I do a lot of work with a plain ol' 20 cent Scripto pencil, with light pressure, which has a very good eraser. An additional tool is a certain amount of knowledge of turnouts some of which I shall present in tabular form in a future article, but a great deal of which is contained in NMRA D 3d.1 thru D 3d.4, almost indispensible to intelligent model railroad designing and construction.

What paper to use Most popular perhaps is a plain sheet of typing paper or social stationery, provided the layout will fit on it. Several pieces can be scotch taped together to make a larger sheet. The back of a calendar sheet is handy, but best of all is a roll of white shelf-paper. When you are satisfied with the design, make a tracing of your plan so that you can get several blueprints made for your own use and for criticism by friends. Actually, *black on white* prints are better than blueprints since you can mark on them with any pencil: their slight extra cost is money well spent. You can use plain tracing paper if you wish, but corrections with eraser or razor blade often put a hole in it. I suggest using a high grade vellum tracing paper on which you can erase to your heart's content, scratch out if you want, and still be able to draw over the change in ink. This is expensive, but half a dollar should cover all you'll need, at any blueprinters.

Material to Use

I mentioned graph paper before, but would suggest you shun the popular 1/10" graduations like in a plague unless you want to make your final drawing to 1.2" scale. The 1/10" graduations make it difficult to use any other scale. 1/12" graduations would be best, but ⅛" are ok since then you can use either ¾" or 1½" scale. In fact you can use 1" scale over them as easily as you can do it with a ruler except that the usual heavy lines 1" apart are confusing. Some graph paper is transparent enough to have blueprints made from it. On a complete layout plan showing wiring, scenery, hidden tracks, etc. my opinion is that many cross lines from graph paper are confusing. I much prefer ticking off the edge of the plan in units of one real foot.

It is not necessary to use drawing ink on a plan for your own use, since it is too hard to make changes. What you can do is to ink in trackage as you go along, say a week at a time. Your tracks will then stand out in "bold type" on a blueprint, while the scenery, etc., done in pencil will rightly take second place. Elevations, once settled, can be inked, but two-railing should not be inked until after the line is in operation because changes in location of gaps and feeders and in block designations often are found desirable as you go along.

No "layout" any more than a crude sketch on the back of an envelope should be drawn without use of a definite scale and with proper tools.

I cannot go into the general design of a layout in this article—putting a reverse loop here, a turntable there, the yards over there, starting a grade, and so on. I'm concerned with putting your plan down on paper: you may find out in so doing that you *cannot* put a yard there, that while you can fit in a turntable you'll have to substitute a rectangular for a "round"-house, that the grade can really start back farther and so can be gentler, that the radius of a proposed curve will have to be 2" less than you wanted it, that a #4 switch will have to be used instead of a #6, and so on. That is the reason for drawing your track plan to scale.

Adding Curve Sections

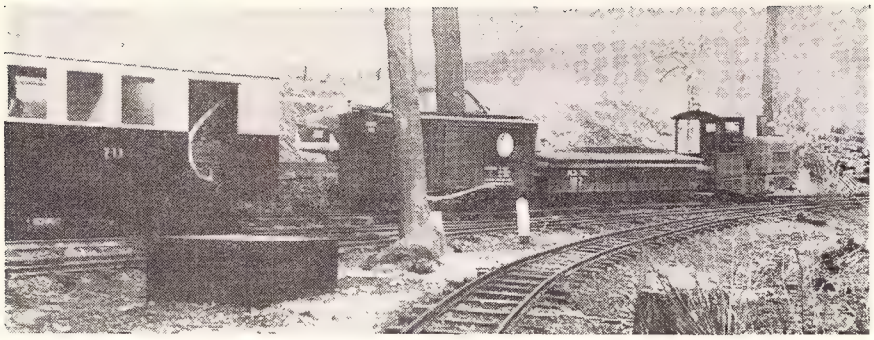
In drawing a layout, *put in your curves first,* then connect them with tangents (straight track). At worst, add a curve to one tangent, then affix the next tangent to that curve. Try not to get in a position where you have to draw a curve connecting (tangent to) two straight tracks: it is not an insoluable problem to do so, but it is easier not to.

In your preliminary scale drawings, do not worry about varying the radii of your curves or about such high-falutin' things as transition curves: you can easily find places for these later on. It is common model railroad practice to have all curves the same radius, or at least not more than one or two different radii. This is caused by the wide use of "roadbed" which is available in certain radii only: the use of just one or two sized curves makes purchase more economical and easier.

How to fit switches in is another matter. A typical drawing that I see simply has a yard ladder drawn as convenient, whereas careful drawing would show perhaps that not quite as ample a yard is possible.

(To Be Continued)

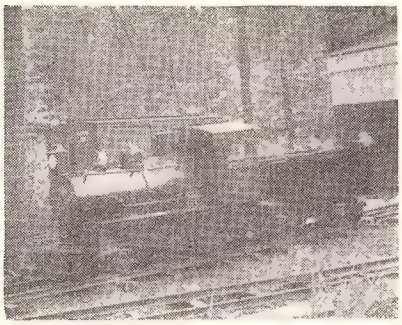
METAL band-aid boxes are very handy for keeping HO gauge parts. Their hinged lids may be labelled and they may be stored in a drawer or box, each one taking up very little floor space.—*T. J. Castil*



15" gauge jeep diesel and, on the left, a fast electric interurban.

A Paul Bunyan Model

FEW hobbyists get the chance to share in the fun of owning and operating an outdoor railroad of proportions to accommodate passengers, but among these privileged few are members of the Reading Society of Model Engineers. Operating 15" gauge equipment, the boys are working hard towards their goal of a complete model railroad empire. Several thousand feet of track have been laid over every type of terrain. In one section of the line, an entire summer was consumed in the preparation of a long fill as an approach to a bridge. The bridge itself is a five span affair, a system of concrete piers and abutments.



The old standby, a rebuilt steam engine.

Motive power on the line includes a completely rebuilt steam engine, purchased from an amusement park, a jeep diesel powered with a gasoline motor and a gas electric interurban. The latter is a four passenger unit 13 feet long, 5 feet high and 34½ inches wide, propelled with a 60 HP Ford V-8 motor. Rolling stock includes an old-fashioned box car, a *fancy* twelve foot gondola (for guests) and one substantial steel open-end gondola which is the workhorse of the line. It is this last car which carries the dirt for fils, ties and the cinders for ballast.

All the usual railroad structures necessary to service a first class line will be included on this outdoor pike. Every Sunday during warm weather, the boys (and their families) can be seen hard at work going about the many tasks necessary to complete the system.

CERTAIN sardine cans when emptied and washed provide a source of thin gauge aluminum that is very handy around a model railroad, particularly if you want a metal that will not hold solder.—*Carl S. Vincent*

. . . for the ice platform

BLOCKS of "ice" are included with reefer icing platform kits, but if real ice were left out the way we model railroad men leave it, it would melt in the sun. I have cemented my ice in place, then shown that it has melted by spotting the platform with water glass (used in preserving eggs, and the component of some ballast cements). When this dries, it looks like a puddle of water. . . . *Calvin Keswick*

. . . a tip on painting

A good paint job is not achieved through the use of cheap materials. It is wise to obtain the best paints, thinners and brushes available for use in model work. When painting wooden surfaces, it must be rubbed down with a fine abrasive paper until it is satin smooth otherwise any small blemish or rough surface will mar the finished paint job.

. . . suggestion for the novice

WHEN building your first layout, try a simple track design, if possible a plan that has been published in RMC. This will assure you a thoroughly worked out pattern with all the major problems overcome by seasoned experts. In good layout construction, the idea is not to see *how much* you can put in a space, but how much *realism* and sensible operation you can get. When duplicating a layout previously published in RMC, it may be necessary to make slight alterations to fit your particular space requirements. Any changes in track design should be made before any track is laid. This will prevent many future headaches.

L-O-N-G GON!

Stretch your model dollars with Ulrich's HO 52' 6" Gon. It has lettered and painted die-cast sides and wood floor. Completely detailed. Sprung trucks. Easy to build Only $2.50 Road names: Santa Fe; Pennsy; CNJ; RI; N&W; LV.

ULRICH Model kits

4233 Babcock North Hollywood, Calif.

Sold only through dealers

FINE TOOLS and MOTOR ACCESSORIES

for the modelmaker and craftsman

Metals, Swiss needle files, riffle files in all sizes, drills, cutters, burs, mandrels, discs, wheels, brushes, scribers and other small tools for working wood, metal, or plastic. Send .50 for 90-page catalog. Leaflet of 30 sizes plastic boxes free. Dealer inquiries invited.

SCHRADER INSTRUMENT COMPANY

Independence 1, Iowa

You have tried the rest—Now try the best!

Write Dept. 20

SMS AT E AND H means "SUPER MAIL SERVICE"

Write Dept. 20

America's most complete model railroad catalog. 84 pages—all gauges, including hard-to-find tools and accessories for the sum of 35 cents. It is fully illustrated and has charts and data! This is new, enlarged 1952 Edition!

Please print name and address—no stamps!

Want to know what the manufacturers have in production for future releases? How good they will be? What the best buys are in your gauge? Want to save money on clearances? Then subscribe to E & H's famous IRON HORSE. Send for a free sample copy today! AIRPLANES—BOATS—CRAFTS CATALOG 25c

THE E AND H STORES

130 W. CHELTEN AVE. PHILADELPHIA 44

EASY TO BUILD SCALE MODEL TRUCKS

Authentic replicas of the big highway freighters, Deisel semi-trailers, tank trucks, cab-over engine models, etc. Complete in every detail. All parts cut to size. Colorful decals included. Seven styles to choose from, all priced $1.50 or less Send stamps for catalog sheets.

MINIATURE TRUCKS CO.

P. O. Box #201 Benton Harbor, Mich.

TROST MIGHT HAVE IT - - -PROBABLY HAS

TROST TROST TROST

A to Z List "TROST LINES" (Continued from last month)

DE BOLT
DENNYMITE
DINKY TOYS
DECOR MILLS
DYNA MODEL
DURO MATIC
DARWIN
DOOLING BROS.
DOWST
DREMEL

(Continued next month)

Probably no other wholesale hobby distributor in the entire middle west has as big a stock as TROST in Chicago. TROST'S shelves are stacked with both the common and the rare items of the hobby industry. Miniature lamp bulbs, balsa wood, beads, jewels, leathercraft, tools, supplies, small parts. DEALERS WRITE for complete A-Z List.

TROST

Modelcraft and Hobbies

EXPERIENCE 22 YEARS COUNTS

3111 W. 63rd Street Chicago 29, Illinois

PLANES-TRAINS-SHIPS- RACE CARS-TOOLS-TOYS-CRAFTS-PARTS-SUPPLIES

market news **WHERE TO BUY** *new products*

CALIFORNIA—BURBANK

HO trains & accessories
Open 10 a. m. to 6 p. m.
Mon. thru Fri. Evenings 7 to 9

HOBBY BOBBY'S

3518 W. Victory Blvd. Ch.. 05062

CALIFORNIA—EL MONTE

EL MONTE MODEL SUPPLY

Open Evenings 7-9 except Fri. & Sun.

645 E. Bryant Rd.

CALIFORNIA—GLENDALE

Specializing in Model Railroad Equipment and Supplies
Hours 9 A.M. to 6 P.M. Tuesday—Sunday

THE BRASS HAT HOBBY SHOP

1001 N. Pacific Ave. Glendale 2

CALIFORNIA—HOLLYWOOD

HOLLYWOOD HOBBY & ELECTRIC SHOP

Hillside 5070
Repairs While You Wait
Hours: 9:00 A.M. to 8:00 P.M.
"Buy — Sell — Trade — Repair"

1522 N. Cahuenga Hollywood 28

CALIFORNIA—LONG BEACH

Complete Stock of Model Supplies
Railroads—Airplanes—Ships

RAY'S HOBBY MODEL SUPPLIES

1222 American Ave. Long Beach 13

CALIFORNIA—LOS ANGELES

Scale & tinplate sales & service.
FREE LANCE PARTS & SUPPLIES
9 to 6—Mon. & Fri. 9 to 9. Closed Sun.

ALLIED MODELS

10920½ W. Pico Blvd. AR 9-2228

CALIFORNIA—LOS ANGELES

HO & O Scale Model Railroad Equipment
Lionel Trains and Equipment

CARL'S MODEL SUPPLY HOUSE

8108 So. Vermont Ave. TH 7115

CALIFORNIA—LOS ANGELES

Model—Hobby—Craft—Magic Supplies
"Simply Everything"
Daily—Sundays 9 A. M.-9 P. M.

"COLONEL BOB'S"

3709 W. Pico at 4th Ave. Los Angeles 6

CALIFORNIA—LOS ANGELES

Railroads (all gauges) Machine Work
Railroad Repair Service

TROXEL BROS. MODELS

202 S. Western Ave. Los Angeles 4

CALIFORNIA—PASADENA

Pasadena's Hobby Center for Trains
Planes - Boats - Racecars - Supplies

ACE MODEL SHOP

1655 E. Colorado St. Pasadena

New Scenic Material

What would seem to be one of the most revolutionary materials ever offered to model builders is now available under the trade name of "Celastic." It has a hundred and one uses around a miniature railroad, cutting construction time to a minimum.

This "Celastic" is actually a chemically treated paper which, when dipped into a certain fluid, can easily be shaped or molded into any form or pattern desired. It is ideal for modeling mountains, cliffs, ravines and any other form of terrrain found on a model pike. As "Celastic" is waterproof, it proves perfect for duplicating waterways of every shape and size.

Plaster, paper mache, etc., will apparently be outmoded with this new product. It is light in weight so that no intricate framework is required yet still strong enough to easily withstand any normal use. Unlike other scenic materials, "Celastic" is claimed not to crack or chip. To form a mountain, "Celastic" is simply dampened in the special fluid, then draped over a simple form of crumpled papers, wood block, etc. The different crevices, gulleys, etc., are then easily formed with the usual tools.

"Celastic" will adhere to almost any material used on a model railroad so that trees, buildings, rocks, shrubs, etc., can be permanently installed on a pike with ease. For illustrated brochure describing this new material,

Refer to M3352. See page 50.

New Tinplate Catalog

One of the most comprehensive catalogs ever issued covering American as well as foreign tinplate items has just been released by Polk's Model Craft Hobbies, 314C Fifth Ave., New York City. This catalog editorially covers all phases of tinplate, from the earliest equipment of years ago through layout construction, tablework and scenery. A particularly valuable section tells which makes of domestic and foreign tinplate can and cannot be used together on the same layout.

The catalog section includes complete catalog listings of A. C. Gilbert, Lionel, Trix, Maerklin and Rivarossi as well as many other makes. Live Steam and clockwork models are listed as well as the electrics; HO, S and O gauges are covered. The booklet, 148 pages, sells for 50c which is refundable on first order.

Electrical Manufacturer Moves

The Model Rectifier Corp. has moved to larger quarters in their own building at 557 Rogers Ave., Brooklyn where they will continue to manufacture Model Packs, Power supplies and electrical parts for railroad modelers.

CALIFORNIA—SACRAMENTO

Model Race Cars, Trains, Boats,
Airplanes, Tools, Supplies

"HOBBYCRAFTS"

1327 Jay Street Sacramento

CALIFORNIA—SAN FRANCISCO
—OAKLAND

Lionel Electric Trains, Accessories
Racecars, Motors & Repairs

JACK COLLIER'S "Toys for Men"

3669 Grand Ave. Oakland 12
693 14th St. San Francisco 5

CALIFORNIA—SAN FRANCISCO

Select model railroad equipment at
Northern California's largest store in
our Fourth Floor Hobby Shop

THE EMPORIUM

835 Market St. YUkon 2-1111

CALIFORNIA—SAN FRANCISCO

Tinplate—Scale S and O
Try our mail order service.
Open Fridays 'til 9 P.M.

TOYS & HOBBIES

1504 Divisadero (at Geary) San Francisco

CONNECTICUT—BRISTOL

We Specialize in Train Repairs. Complete line Lionel-A.F. Scale Trains. Planes—boats—race cars—acces. Hobby supplies.

HOBBY CENTER

N. Main St. Tel. 7273

CONNECTICUT—MIDDLETOWN

HO-O-S Gauge Railroads
Lionel & Gilbert Tinplate kits and parts
Factory authorized repair station.
Open until 9 P.M. Fridays

AMATO'S HOBBY CENTER

600 Main Street Phone

CONNECTICUT—NEW HAVEN

All Reliable Lines
Open 8 to 6—Fridays 'til 9

PARMELE & STURGES

51 Crown St. New Haven

CONNECTICUT—STAMFORD

Complete HO Supplies
Operating Layout
Artist & Craft Materials

HOBBY CRAFTS

157 Main St. Stam. 4-9882

D. C.—WASHINGTON

Railroaders' hdqts. Complete stock HO, OO, O supplies. 32 years of railroading.
8:30 a. m. to 6:00 p. m.

SUPERIOR LOCK & ELECTRIC CO.

1410 L. Street, NW. REpublic 1027

FLORIDA—TAMPA

EXCLUSIVELY RAILROADS
Largest Selection in the South
Open till 10:00 P. M.

CHESTER HOLLEY

4002 S. Dale Mabry Phone 61-3282

market news WHERE TO BUY new products

ILLINOIS—BERWYN
Authorized Lionel & American Flyer Service.
Everything for the model railroader.
"Model Railroading is our Hobby"
GOLDECK'S HOBBY SHOP
2615 So. Ridgeland Ave. Berwyn
Stanley 8-6615

ILLINOIS—CHICAGO
Model Trains—Ships—Planes Supplies
Chicago's GREATEST Stock
ALL NATION HOBBY SHOP
182 N. LaSalle St. Chicago 1

ILLINOIS—CHICAGO
In the HEART of the Loop
Railroads—Ships—Planes
BEN'S HOBBY SHOP
134 North Dearborn Chicago 2

ILLINOIS—CHICAGO
The South Side Railroad Center
Steam—TT—HO—S—O—HON3—Traction
Test tracks in all gauges
Daily—12-9:30—Sat. and Sun. 10:30-9:30
ROCKY'S HOBBY HAVEN
6924 S. Stony Island Ave. Normal 7-3960

ILLINOIS—CHICAGO
Available Items for ALL Modelers
Trains—Planes—Boats
SIMONSEN MODEL SUPPLIES
3054 N. Greenview Chicago 13

ILLINOIS—CHICAGO
Complete Stock Supplies—Boats
Railroads Airplanes Race Cars
UPTOWN HOBBY SHOP
4508 Broadway Chicago 40

ILLINOIS—OAK PARK
Complete Stock-Parts-Tools-Kits Rotary Switch Machines. Operating HO Layout. Open every evening—9 p. m.
B & H HOBBY SHOP
6222 Roosevelt Rd. EUclid 3-1083

INDIANA—INDIANAPOLIS
MODEL RAILROADING EXCLUSIVELY
Open Daily & Mon., Tues., Thurs. Eve.
LES' REPAIR SERVICE
1724 Central Avenue Indianapolis 2

MASSACHUSETTS—BOSTON
Hobby Headquarters for Model R.R.'s
Railroading a Specialty
BOSTON MODEL R.R. CO.
665 Atlantic Ave. Boston

MASSACHUSETTS—BOSTON
MODEL RAILROADS EXCLUSIVELY
Tinplate—Scale
Lionel Approved Service Station
ERIC FUCHS
26 Tremont Street Boston

15° HO Gauge Crossing

A fifteen degree crossing has been added to Midlin's growing line of model railroad trackage, the first of its kind for HO gauge. In addition to this crossing, others are made in 90, 60, 45 and 30 degree sizes. The new crossing is fully assembled, mounted on Midlin's patented cork roadbed. The design of this crossing permits simple installation and eliminates wiring problems. All you do is hook up the crossing to adjoining track with fishplates as the crossing is, in effect, *Self-wired* being, insulated by the plastic center made integral with the unit.

Midlin's complete line of Cork Base Trackage including track kits, crossings and turnouts are all available at the present time, being distributed exclusively by Howell Day of New Market, N. J. For details of line,

Refer to M3452. See page 50.

California Hobby Show

The fourth annual California Hobby Show will be held at Shrine Convention Hall in Los Angeles March 21-30, inclusive. All types of hobbies will be included with model railroading one of the feature attractions. More than 50,000 individual objects were shown in 350 displays during the 1951 exhibit and these totals will be exceeded in this years event. Visitors from every state in the country are expected and, according to the show committee, they will witness the finest display of model railroads ever shown.

New Rolling Stock in HO

A new line of freight and passenger cars, matching in craftsmanship and detail their original line of "Streamliner" passenger equipment, has been announced by American Model Toys, of Auburn, Ind. Whereas the O gauge equipment produced by this Company is made of highly polished extruded aluminum, the new scale freight cars will be made of a plastic material.

According to the manufacturer, this special plastic has several outstanding features; it is virtually indestructible; it is lighter than aluminum enabling a locomotive to pull a longer string of cars; and, perhaps most important, are the attractive color combinations possible in the pigmented plastic. Immediate plans call for production of NYC's Pacemaker, the B&O's Sentinel, and the PRR's Merchandise Car.

The passenger equipment will be similar to the O gauge cars, alike in all details except for a proportionate reduction in overall size.

See Model Building Contest Announcement! Page Forty!

MICHIGAN—DETROIT
HO—O—S—OO—TT
Large Operating Layout
Model Railroad Kits and Supplies
Open evenings till 8 except Tues. & Thurs.
THE HOBBY EXCHANGE
3248 Fenkell Ave. Un. 3-9172

MISSOURI—KANSAS CITY
COMPLETE SALES & AUTHORIZED SERVICE
Lionel-American Flyer-Marx
Scale Equipment
SIEBER BROS.
404 Westport Rd. Kansas City

NEBRASKA—LINCOLN
Complete Stock
TT—HO—O—Lionel
9:00 to 5:30 & Thursday evenings.
LINCOLN HOBBY SUPPLY
1123 P St. 2-4692

NEW JERSEY—BLOOMFIELD
Railroad Supplies & Tools
HO—OO—S—O Gauges
DELANY MODEL R. R. SHOP
38 Union Place Bloomfield

NEW JERSEY—BLOOMFIELD
Bloomfield's Complete Hobby Shop
HO-S-TT
American Flyer Sales & Service
"JACK'S" HOBBY AND CRAFT HOUSE
735 Bloomfield Ave. Bl. 2-2887

NEW JERSEY—GUTTENBERG
Model Boats—Air Planes—Race Cars—Trains—Engines and Accessories
Open 6 Days—Evenings till 10
HERMAN'S HOBBY HOUSE
6908 Bergen Line Ave. Union 5-5597

NEW JERSEY—HADDONFIELD
South Jersey's hdqts. for trains. All gauges — American Flyer Service Station. Open Noon till nine. Just off King's Highway
HIGHWAY HOBBY HOUSE
20 Tanner Street HAdnfld-9-6860

NEW JERSEY—HILLSIDE
American Flyer—Lionel
HO Model Trains—Planes—Boats
Handicraft—Sporting-Goods
HILLSIDE HOBBY SHOP
1303 Liberty Ave. WA. 3-3895

NEW JERSEY—IRVINGTON
Leading HO and S Gauge Kits Auth. American Flyer Sales & Repairs. Open 9 ot 8: Wed. to 6. Operating Layout.
HOBBYCRAFT
888 18th Ave. ES-2-1368

NEW JERSEY—JERSEY CITY
"HO"—"S", Trains and Accessories
American Flyer Sales Service
Planes, Engines, Crafts
THE HOBBY SHOP
2182 Blvd. Jersey City

market news **WHERE TO BUY** *new products*

NEW JERSEY—NEWARK

HO Operating Layout
Lionel, Am, Flyer Sales and Service
Open 10 A. M.-9 P. M.
Sun. 10 A. M.-5 P. M.

ACE HOBBY-CRAFT and FIX IT SHOP

385 W. Market St. Mi. 3-4088

NEW JERSEY—ORANGE

HO, O, Train Accessories, Lionel & Am. Flyer Sales & Service. We sell Trains & Accessories only.

TRAIN CENTER OF AMERICA
191 Main St. Or. 4-6285, 6969

NEW JERSEY—RUTHERFORD

Rutherford's leading RR, headquarters TT, HO, S, O gauges, Lionel, Gilbert, Parts. Gargraves track.

PAUL'S HOBBY SHOP
319-A Union Ave. Ruth 2-10263

NEW JERSEY—WESTFIELD

Kits and Supplies for Railroads Boats and Airplanes

CENTRAL JERSEY MODELS
Cor. North & Lenox Aves., Westfield

NEW JERSEY—WEST ORANGE

Large selection of HO & TT Supplies
Planes—Boats—Motors

WILLOW HOBBY NOOK
25 Tremont Ave. West Orange

NEW YORK—BRONX

The largest and oldest exclusive train center in the Bronx, N. Y. C.
"Your model railroad problem is ours"
Open daily 9 a. m. to 8 p. m.

ELECTRO-CRAFT APPLIANCES
3 W. Tremont Ave. LUdow 3-3737

NEW YORK—BROOKLYN

AUTHORIZED
Lionel & American Flyer Service Station
S—O gauge train accessories
HO scale kits & supplies

BROADWAY HOBBYCRAFT
1638 Broadway Glenmore 2-8866

NEW YORK—BROOKLYN

Exclusively RR. Featuring Parts
Authorized Mantua & Varney Repair
Daily 12-9:30 — Sat. 10:30-9:30

HOBBY ASSOCIATES
479 Atlantic Ave. near 3rd Ave.
Ulster 5-4963

NEW YORK—BUFFALO

Complete Stock—Model Airplanes
Boats—Trains—Racecars—Supplies

HOWARD E. RUTH MODELS CO.
1466 Genesse St. Buffalo 11

NEW YORK—JAMAICA

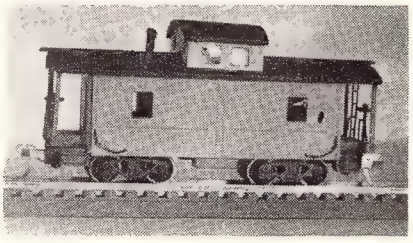
Everything in Hobbies. All gauges. Model & Tinplate. Specializing in Repairwork. Open till 7 p.m. daily—9 p.m. Mon. & Fri.

JAMCO (Jamaica Co. Hobbies Inc.)
90-04 168th Street JAmaica-3-9140

1886 Passenger Depot

As a companion structure to their 1886 freight house, Ayres Scale Models of Garden Grove, Calif. have introduced an accurate scale model of an 1886 passenger depot in HO gauge. This building, in kit form, features scale embossed board and bat siding, printed in the rich color of the prototype. All parts, including such detail as door frames and signs, have been provided to make a most realistic model.

TT Gauge Freight Cars



Several new cars have been made available to modelers in TT gauge, the first an interesting tail-ender under the "Gandy Dancer" label. The model illustrated is most unique in that the cupola is movable; it can be secured to the roof in any desired position. Western modelers will appreciate this feature of the steel caboose model, it enables them to duplicate many different prototypes.

The model is available in kit form with with windows in both the doors, cupola and sides accurately die-punched. Sufficient room on the car sides makes it possible for the modeler to cut in additional windows to meet requirements of a particular prototype. All the heavy card parts are printed in bright caboose red including clear rivet detail. The kit is inclusive of all hardware (automatic HP couplers, cast metal step assemblies, handrail, etc.) but is less trucks. Sufficient material is included for models using platform-roof supports as illustrated.

In addition to the caboose, three new hopper car kits are also available, lettered for the NYC, Berwind and Burlington. These are constructed of wood with clearly printed car sides. These are the first TT gauge hoppers to have open tops; suggestions are included with the

NEW YORK—NEW YORK

Trains is our business — we have no sidelines. Authorized repair station, Mantua, Thomas, General Models, Lionel, Am. Flyer, etc.

MODEL RR. EQUIPMENT CORP.
23 W. 45th St. LU 2-2760-1-2

NEW YORK—NEW YORK

Largest HO Stock in N.Y.—Lionel—Gilbert Bicycles—Guns—Sporting Goods—Toys

TRY-MO HOBBYCRAFT
81 Chambers St. Worth 2-0472-3
Also at 1326 Bway Hewlett, L. I.

NEW YORK—ROCHESTER

"TRAIN DOCTOR" GARDNER

SCALE—Tinplate
Lionel Factory Approved Service
Manufacturers of Gargraves Trackage
Exclusively model railroad equipment

2261 Dewey Avenue Glenwood 2847

OHIO—CLEVELAND

Trains—Planes—Boats—Cars—Tools
Accessories—All Train Repairs

CLEVELAND'S HOBBY SHOP
Lorain at W. 45th Cleveland

OHIO—CLEVELAND

Downtown Headquarters—Trains
Planes—Boats—Cars—Tools
Accessories

THE HOBBY HOUSE, INC.
800 Huron Road Cleveland 15

OHIO—LAKEWOOD (CLEVELAND)

Hours 10:00 a.m. to 9:00 p.m. Sundays and Holidays 12:00 noon to 3 p.m. Closed Thanksgiving, Christmas, New Year's.

HOBBY ENTERPRISES, INC.
16302 Detroit Ave. BO 2-1675

OHIO—TOLEDO

TOLEDO HOBBY CENTER

Ohio's specialists. All Gauges, Kits Accessories, Supplies.
Open Daily

Madison at Erie Toledo

PENNSYLVANIA—PHILADELPHIA

Trains only, Lionel A.F. & G.M.C.
Authorized Service & Repairs
Complete O Scale & Tinplate Parts

OLNEY MINIATURE TRAINS & PARTS
142 W. Linton Street Philadelphia 20

PENNSYLVANIA—PHILADELPHIA

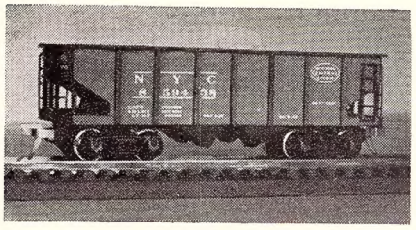
Everything in HO—PLUS!

QUAKER CITY HOBBIES
NE cor. 6th & Market LO 3-7465

PENNSYLVANIA—PHILADELPHIA

The HO headquarters of central Philadelphia. On 16th Street between Chestnut and Walnut. Wednesday till 9.

TOM THUMB HOBBIES
107 S. 16th LO 7-7194



illustrated assembly directions for inserting loads if desired. Although the model is open, the car is surprisingly strong—wood shaped angles around the car top provide a rigid assembly. Kits are complete with all hardware parts and HP automatic couplers . . . with exception of trucks. These, too, are now being produced under the "Gandy Dancer" label; accurately detailed die-cast metal Arch Bar trucks which are exceptionally free rolling. For illustrated folder describing the complete "Gandy Dancer" line,

Refer to M3552. See page 50.

AFTER being cursed for years with shoddy cement tubes which break out on the side or bottom and deposit a wad of it in my hand, I finally discovered that my ten year old son who builds model airplanes had been aware of the answer for some time. He simply wraps paper around the tube, and secures it with Scotch tape. This protects the tube against bruises and, if it does break out at the bottom, the cement is contained.—*Lawrence Allen*

(Editor's note: Don't forget to split the buck with junior)

I have a plastic Pioneer and a motorless mantel model of the General mounted on flat cars to make interesting loads. I exhibit them at sidings near various stations. Thus I have the beauty of old-time equipment on a modern 100% diesel railroad. . . . ***Cal Ness***

A tank car with a ruined wrapper can be painted black and lettered for your own railroad. It can then be in water service to outlying points, or can act as an extra tank behind the tender to permit the steam engines to make longer jumps between water stops. . . . ***M. Lucerne***

THE Prototype railroads are important markets for such basic industries as coal, petroleum, timber, iron and steel. In recent years, 11% of a year's coal production has been used by the railways; 5% of the timber; 17% of the iron and steel products; 41% of the diesel fuel; and 13% of the fuel oil.

Narrow Gauge Ideas

In operating a two-gauge pike, we should remember that a standard gauge carload is usually two narrow gauge carloads, and sometimes three. Thus a standard box car load of grain, for example, and a standard gon load of coal would probably mean a narrow gauge train of two box cars and three lowsides to "haul in" the grain and coal or it would involve two trips with fewer cars.

A typical feature of NG operation was the "mixed train" (freight and passenger cars in the same consist). This system, still used on many short lines "just as wide," saves engine miles and enables a short line to move freight and yet hold an invaluable mail contract (to heck with passengers, they ride if they want to). As a freight train, the "mixed" works like a peddler, with intricate switching problems at every stop, yet that bag of mail builds a fire under things and keeps the boys hopping, as scheduled times must be kept.

Any modeler tired of running them "round and round" his 4 x 6' loop of track ought to try the "mixed train"—especially if he has but one loco. After trying to stay on scale time with even an easy schedule, he will not be surprised to learn that the prototypes often ran past set-outs, bringing the cars back on the next trip, and indulged in some fast running through the "back woods" to regain lost minutes. This is the ideal operation for a one-man, one-loco pike. Sixteen feet of track will seem like sixty, and short sidings will add to the fun. When the second loco arrives, let it work on freight extras. Then things really will be hot.

As a prototype for extensive dual gauge operation, there has never been anything to touch the D & RG, which at one time or another has been involved in plenty of it. Built south from Denver and then northwest from Pueblo, the D & RG was originally entirely narrow gauge. But when the standard gauge Colorado Midland built into the same area, the D & RG laid a third rail to standard gauge in order to meet the threat. At this time the road was thus a standard gauge main line with narrow gauge branches and feeders. It was thus kept dual gauge for a while, so that narrow gauge trains could run direct from Denver to mountain points served by the NG. Later most of this mainline dual gauge was taken out, although there is still considerably such mileage out of Alamosa.

PENNSYLVANIA—TYRONE
Lionel, American Flyer, Model Trains, Accessories, Boats,. Race Cars, Planes, Tools and Cameras. Trains Repaired.
O. A. KENNEDY
1861 Adams Ave. Phone 465-M

PENNSYLVANIA—UPPER DARBY
Serving Delaware & Montgomery Counties One block from the 69th St. Terminal Open 10 to 9
TODD'S MODEL SHOP
7036 Terminal Sq. or W. Garrett Rd.

TEXAS—DALLAS 4
Complete Model Supplies—Racecars Trains, Planes, Boats, Accessories
HALL'S HOBBY HOUSE
4823 Bryan at Fitsburgh Dallas 4

WASHINGTON—SEATTLE
Home of SMRR Pike—HO Club Large Stock of ALL Hobby Supplies Hours 10-6 Wed. & Fri. 10-9 Closed 1-1:30 6-6:30
BUZZ & DOUG'S HOBBY SHOP
701-3 East Pike Ea 8650

WASHINGTON—SEATTLE
MODEL ENGINEERING
Machine Work - Kits - Parts - Repairs Electric Train Service
9524 Roosevelt Way Filmore 4424

WISCONSIN—APPLETON
Full Scale Lines, O to TT Lionel & Amer. Flyer Train repairing. Weekdays 'till 8, Friday 'till 9. Sat. 'till 5.
HOBBY SHOP & RADIO-SOUND SERVICE
318 S. Main St. Tel.: 87

CANADA—HAMILTON, ONT.
All Reliable Brands — Trains, Boats, Planes, Craft, Archery
RILEY HOBBY SERVICE
755 King St., E Hamilton, Ont.

CANADA—WINNIPEG, MAN.
Railroads (HO), Airplanes, Ships, Racecars, Boats, Motors, Accessories
ST. JOHN'S HOBBYCRAFT SUPPLIES
53 Osborne St. Winnipeg, Man.

ATTENTION DEALERS

A listing in the "Where to Buy" section of Railroad Model Craftsman is a constant reminder to readers that there is a good source of supply and service for railroad modelers in their immediate neighborhood.

RATES: Only $35.00 for 12 consecutive insertions; $21.00 for 6 consecutive insertions, payable in advance. For complete details, contact: Advertising Department, Railroad Model Craftsman, Ramsey, N. J.

TRADING POST

and Classified Advertisements

5c per word for all non commercial advertisements. Commercial ads, 25c per word, 21c per word when three consecutive issues are used. 10 words minimum. You must give an honest description of all merchandise offered. Advertiser guarantees money back if purchaser is not satisfied.

Turn unneeded equipment into cash! We will appoint a box number, if requested. Our closing date is the 18th of the second month preceding issue.

RAILROAD MODEL CRAFTSMAN
Classified Dept. Ramsey, N. J.

HOBBY BUSINESS, Excellent Location, Established. Owner Retiring. See, Call, Or Write Geo. Folt & Co., Real Estate, 14 E. Lexington St., Baltimore, Md. Phone PL 5375.

FOR SALE: Lionel 671LSS Steam Turbine Loco $20.00, just factory reconditioned, also 1 milk car $7.50, and 1 cattle car $12.00. Send for complete list. Will sell or trade for HO. Orton Besse, Jr., Box 614, Rayne, Louisiana.

FOR SALE: 6 Lionel #156 Station Platforms. WANTED: 3 pair Lionel 072 #721 Manual Switches. Dana Page, 2 Hood Rd., Danvers, Mass.

256-page model railroading book 35c. Lionel, American Flyer, HO catalog sheets free. Shannon's Hobby Shop, 505-R Franklin, Nutley 10, New Jersey.

RAILROAD MODEL CRAFTSMAN LAYOUT #1 or similar small layouts built to order for hobby or exposition purposes. Write your wants in detail for f.o.b. price. William Schopp, 445 S. Logan Ave., Trenton 9, N. J.

Will Trade Good used Lionel for HO or sell reasonably. Write for list. Harlan Lane, 119 Broadview Ave., Kingsport, Tenn.

Standard Gauge "Lionel"—Track, Switches, Freight and Pullman Cars. George H. Scott, Route 306, R. D., Suffern, New York.

For Sale: American Flyer "S" 302 Atlantic—290 Pacific Locomotives — Smoke — Choo-Choo Freight Cars, 8B-100 Watt. Transformer, 720A-Switches. These items are new, and are priced very reasonable. List, Photo. 10c Coin. M. Frankel, 1655 Union St., Brooklyn 13, N. Y.

WANTED: American Flyer HO—155 Switcher, good condition for American Flyer HO—151 Hudson just returned December 13, 1951. A. C. Gilbert Repair. M. J. Prunty, 76-41 Vleigh Place, Flushing 67, New York. Phone LI 4-0797.

TT GAUGE finished HP Atlantic, Switcher, Hudson, Mountain, Northern, Consolidation, Diesel AB, Lindsay Dockide. 80 finished freight cars of all manufacturers. Jewel, Starline and HP Passenger Cars. Steamship Purser changing Gauges offers the above at 40% off kit price in lots of $25.00. Equipment may be seen and tested at Waldell Hobbies, 1622 Newkirk Avenue, Brooklyn, N. Y.

WANTED: Old Toy Trains, Street Cars, Catalogs, American and German, any condition or type. Offer cash or will trade New O, SS, OO, HO, TT Scale trains. Dr. Harrison, 307 Washington, Waukegan, Illinois.

Want Orkincraft Clockwork Miniature boat. Box #342, care of Railroad Model Craftsman, Ramsey, New Jersey.

Want to hear from owners of American Flyer S gauge layouts. Please write to Box #343, care of Railroad Model Craftsman, Ramsey, New Jersey.

Railroad Club News

TIFFIN, OHIO.—The spring meeting of the North Central Region of the NMRA will be held in this city May 17 and 18 with the Tiffin Model R.R. Club as hosts. A well balanced program has been arranged for the two-day meet including a special railroad show; many layouts in the area will be open for inspection and the host club will hold open house on Sunday with their O gauge, two rail, DC scale layout on exhibit.

HUNTINGDON, PA.—The Huntingdon County Model RR Club will conduct a Fan Trip on the Huntingdon and Broad Top RR Sunday, May 11. Trip will include 100 mile scenic tour, inspection of the old H&BT shops in Saxton, Pa., and dinner in historic Bedford. For further information, write to J. Alex Steel, Box 218, Huntingdon.

SAN DIEGO, CAL.—Meetings of the Balboa Park Model RR Club (O gauge) are held every Friday evening with visitors cordially invited. Anyone interested should contact C. Good, 820 Tangiers Court.

CANTON, OHIO—A fan trip on the B&O from this city via Barberton and Akron to Willard, Ohio, will be held May 4 by the National Railway Historical Society. The trip will include photo stops, inspection of roundhouse and new diesel shops at Willard then will continue over freight only trackage from Willard to Sandusky. If proper arrangements can be made, the trip will run to Catawba Island through the famous peach growing country via the NYC and the Lakeside and Marblehead RR. Train will consists of a 5500 series locomotive (former B&M), various representative types of passenger equipment and a lunch and refreshment car. Further information obtained from S. C. Lord, 693 Talbot Ave., Akron.

NEWARK, N. J.—A gigantic hobby circus will be held in the Sussex Ave. Armory on April 18 and 19 which will include displays of finished models and hobbyists at work. Model railroads will be one of the features of this show. All modelers of the North Jersey area who wish to display material should contact the "Hobby Circus, c/o Newark YMCA, 107 Halsey St."

PITTSBURGH, PA.—A most interesting program has been arranged by the Pittsburgh Model RR Club for their regular weekly meeting of March 3. The evening will start with operation of the club's large HO gauge layout, followed by a business meeting at 9 p. m. The meeting will be on fourth floor, 1013 Penn Ave.

CHECK √ ME
FOR FULL INFORMATION

Railroad Model Craftsman
Ramsey, N. J. FREE BUYER SERVICE

Please send me complete information, prices and source of supply on the items I have checked below. This is a free service without obligation—to me.

☐ M3152 Sceni-Kote Flocking Kit ☐ M3352 New Scenic Material
☐ M3252 Switch Machine ☐ M3452 15° HO Gauge Crossing
☐ M3552 TT Gauge Freight Cars

Name .....
Address .....
City ..... Zone..... State .....

Index of Advertising
March 1952

—A—

All Nation Hobby Shop 31
Al's Hobby Shop 3
Athearn Models ..... 4th Cover
Atlas Tool Company 35

—B—

Bowser Mfg. Company 43

—C—

Canadian Institute of Science & Tech. 39
Carl's Model Supply 34
Clausing, Dudley, LeRoy 38
Comet Metal Prod. Company 3
Corr's 5

—D—

Day, Howell 4
Devore 43

—E—

Electronic & Hobbycraft 45

—F—

Farish, Graham Ltd. 4

—G—

Gardner, E. A. 37

—H—

Hines Lines, Inc. 4
Hobby House, Inc. ..... 2nd Cover
Hobby Novelty Shop 41
Hobby Stop, A 39
H. P. Prod's. Company 34

—L—

Lindsay Products 38
Little Engines 37
Lobaugh, Rollin J. 39

—M—

Mantua Metal Prod. Co. 31-36-41
Marnold Company 38
Miniature Trucks Company 45
Model Craftsman Pub. Co. 32-36-40
Model Die Casting Co. 33
Model Pike Prod's. Co. 37-42-39

—N—

Nixon Model Company 39

—P—

Peare, Bob Eng. Corp. 37
Pennsylvania Scale Models 31

—R—

Rex Eng. & Mfg. Company 31

—S—

Scalite 34
Schopp, William 39
Schrader Instrument Co. 45
Schultz & Lawrence 31
Scintilla 39
Scranton Hobby Center 3
Special Shapes Company 41
Sportco Products 3

—T—

Thomas Industries 34
Toy Trains 44
Trost 45
Tru-Scale Models 43
Tucson Train Shop 38

—U—

Ulrich, C. J. Company 4-45
United Drafting Products 43

—V—

Vavrinek, LeRoy J. 39

—W—

Walters, Ben, Inc. ..... 3rd Cover
Wentzco Precision Models 31

Celastic*

REG. U.S. PAT. OFF.

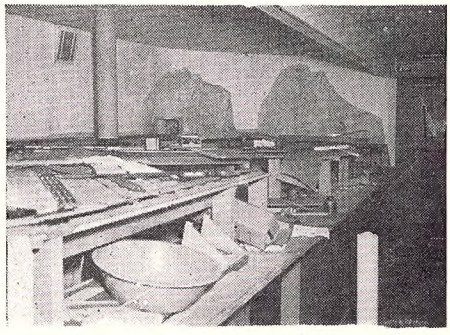
COLLOID TREATED FABRIC

THE NEW WONDER MATERIAL FOR MODEL RAILROAD BUILDING

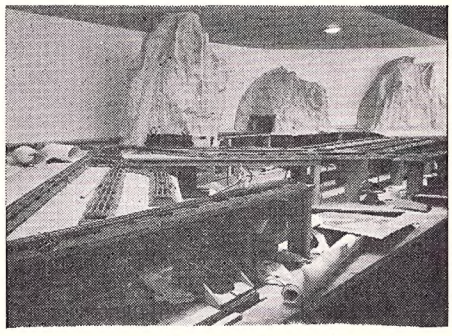
USED FOR LARGEST MODEL RAILROAD IN THE WORLD

- no pastes . . . simply
- dip and shape . . .
- dries in 30 minutes.
- It's lightweight
- Unbreakable . . . and
- Weatherproof too!

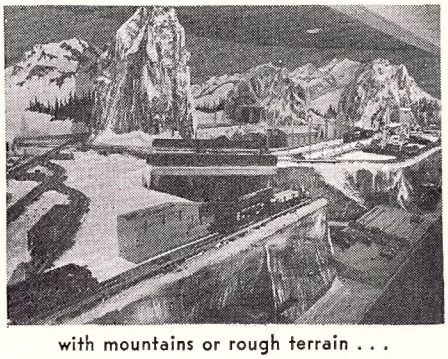
Outmodes paper mache—Glued Rags—Plaster—revolutionary for model railroading!



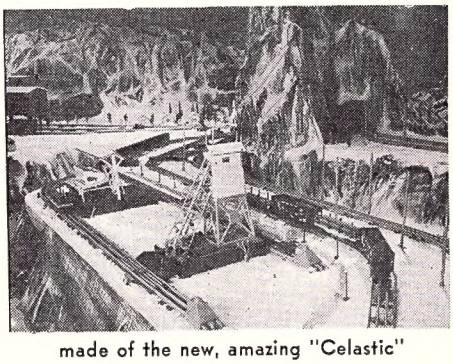
Poles used to support ceilings . . .



can be effectively disguised . . .



with mountains or rough terrain . . .



made of the new, amazing "Celastic"

TO MAKE TUNNELS, ETC.—use a bottle or jar for a form and apply "Celastic" in patches or one piece for contour. By tearing "Celastic" instead of cutting, one obtains a feather edge. A little "Celastic" Patching Compound smoothed over edges will make seams invisible.

MOUNTAINS, LANDSCAPE ROCKS, WATERFALLS, ETC.—Make simple armatures by using wads of crumpled newspaper, paper cartons or chicken wire. Another method is to model with clay or plastilene. Apply "Celastic" directly over the clay model: when "Celastic" is dry, lift off "Celastic" shell.

TO REPRODUCE ROCKS, BOULDERS, ETC.—Cover real rocks with tinfoil, apply "Celastic" in patches or one piece (tinfoil acts as the separator). When entirely covered and thoroughly dry, slit sides, remove shells, then temporarily tape with masking tape. Tear strips of "Celastic", dip into "Celastic" Softener and apply over seams removing the masking tape as you progress.

"Celastic" is used by the U.S. Army and Navy for model and terrain work . . . It has no equal for its extreme lightness and strength . . . Units made of "Celastic" can be made in a fraction of the time . . . and at a fraction of the cost.

THE P.A.L. $50,000 ROCHESTER CIVIL PROJECT

The use of "Celastic" was the outstanding feature in the P.A.L. Rochester Civic Project "Model Train Heaven." This new wonder material reduced costs and saved hundreds of hours of tedious labor. The originator, Captain Henry Jensen, Director of Rochester's Youth Bureau and Police Athletic League, conceived the idea while attending the F.B.I. National Police Academy on crime prevention. One small area of this project is illustrated. The overall display consists of four different panoramas, each a complete model railroad, depicting the four seasons of the year.

WRITE TODAY FOR DETAILED LITERATURE . . . IT'S A MODEL RAILROAD MUST!

Ben Walters inc.

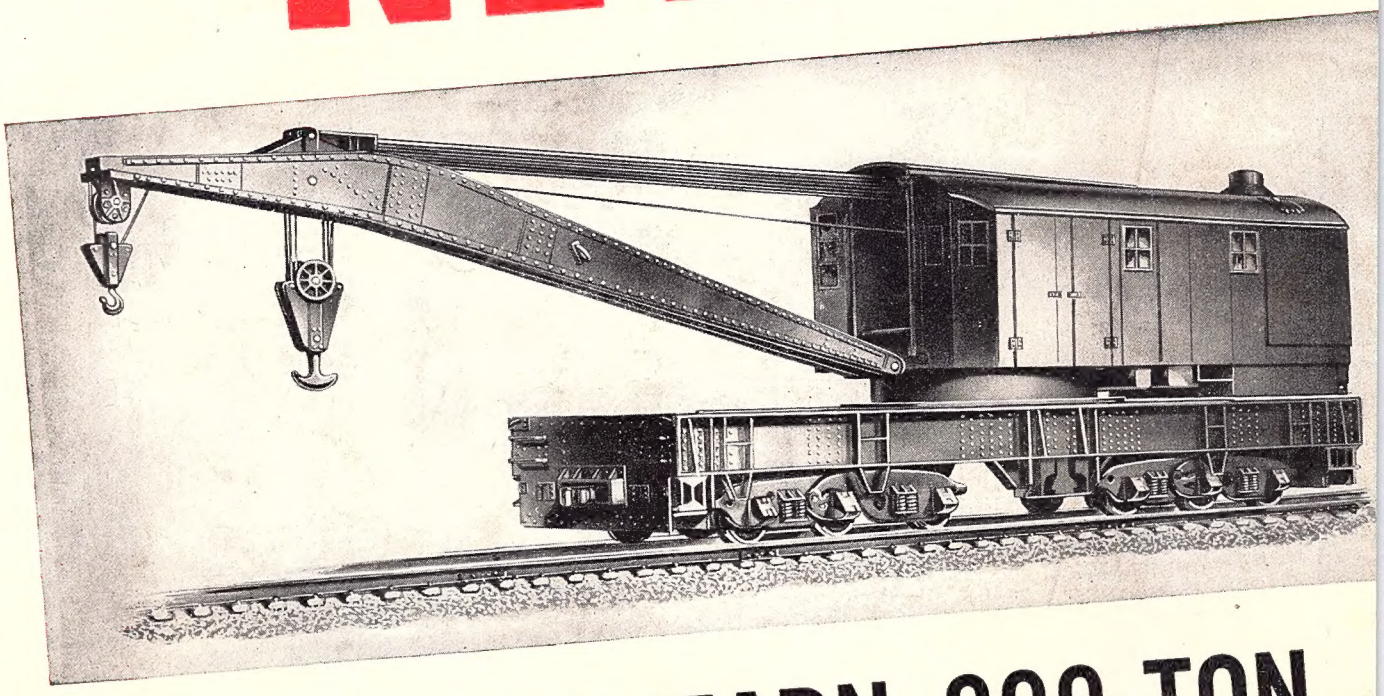
Celastic*

NATIONAL DISTRIBUTORS — U.S.A. AND CANADA
DISPLAY AND ALLIED INDUSTRIES

125 WEST 26TH STREET, NEW YORK CITY 1

*Trade mark of The Celastic Corp.

EXTRA!! NEWS! EXTRA!!



THE NEW ATHEARN 200-TON WRECK CRANE

ATHEARN'S NEW 200-ton Wreck Crane offers the HO builder the ultimate in model building kits.

- One-piece die cast base, cab and boom.
- Individual pulleys (20 in kit).
- Beautifully detailed one-piece hooks.
- Equipped with sprung six-wheel buckeye trucks.
- Cranks for raising and lowering boom and hooks.
- All parts in black finish and fully working.
- Sturdy construction and fun to assemble.

$8.50 complete

SEND FOR CATALOG. 24 page, profusely illustrated, pocket-size catalog of latest railroad models—kits, parts, accessories, prices. Only 10c postpaid.

IRVIN R.
Athearn
11129 VAN BUREN AVE.
LOS ANGELES 44, CALIF.

MFRS. OF AUTO, BOX, REEFER AND TANK CARS, IN O AND HO